800.831.4242
www.Jameco.com

Volume 232 - May 2003

JAMECO®
E L E C T R O N I C S

EXPANDED POWER PRODUCTS
JUST ADDED: 26 PAGES OF TOP BRAND-NAME POWER PRODUCTS

ALSO: PASSIVE COMPONENTS • INTEGRATED CIRCUITS • ELECTROMECHANICAL
TOOLS • TEST EQUIPMENT • COMPUTER PRODUCTS • AND MORE

NEW PRODUCTS	99% IN-STOCK
SEE PAGES 2, 3 & 207-213	LOW-PRICE GUARANTEE
	POPULAR & HARD-TO-FIND ITEMS

| G PG -S -S -S -S | V2 | G | G | V1 | V3 | V4 | ⏚ | N | L |

We'll match the advertised price of any like product. It's that simple! Jameco has made every effort to provide current and accurate comparisons for your review. Competitive pricing data was collected at the latest possible date (3/04/03) from our competitor's web sites. Print screens are available upon request.

Integrated Circuits

See pages 64 - 73 for our complete selection.

Why pay top dollar for a commodity product? Jameco specializes in high-quality, low-cost integrated circuits. As the table below shows, you can save more than 50% in single unit purchases, so you should save even more money when you buy in volume!

Company	Part Number	Unit Price	Jameco P/N	Jameco Price	Savings!	
Digi-K – –	LM340T-5.0-ND	$0.90	51262CP	$0.35	$0.55	61%
Newa – –	38C7343	$0.69	23528CP	$0.35	$0.34	49%
Digi-K – –	LM741CNNS-ND	$0.47	24539CP	$0.29	$0.18	38%
Mous – –	512-DM74LS00N	$0.52	46252CP	$0.31	$0.21	40%

Fans

Our complete selection is on pages 56 - 59.

Don't get hot paying too much… Jameco has a wide selection of fans to meet your cooling requirements and they're competitively priced to save you money. Just compare the examples below!

Company	Part Number	Unit Price	Jameco P/N	Jameco Price	Savings!	
Mous – –	664-D5215HB1-12V	$13.77	75344CP	$7.69	$6.08	44%
Mous – –	664-D12025LB1-12V	$17.48	75467CP	$9.95	$7.53	43%
Newa – –	95B3703	$9.44	161699CP	$7.95	$1.49	16%
Alli– –	599-1040	$9.52	102955CP	$5.25	$4.27	45%

Power Supplies

See pages 6 - 31 for our complete selection.

Jameco just added 26 pages of affordable switching power supplies with detailed engineering specs. Each has been priced to save you money while maximizing the reliability of your end product. We just added the Artesyn high-quality U.S. brand and expanded our value-priced high-quality line of Mean Well power supplies.

Company	Part Number	Unit Price	Jameco P/N	Jameco Price	Savings!	
Digi-K – –	62-1020-ND	$169.14	123449CP	$69.95	$99.19	59%
Alli – –	800-4065	$274.05	137656CP	$97.95	$176.10	64%
Newa – –	52F8977	$71.38	218561CP	$64.59	$6.79	10%
Newa – –	34C3470	$123.00	218991CP	$116.85	$6.15	5%

DC-to-DC Converters

New products on pages 33 - 43.

We just expanded our line of DC-to-DC converters to include new products from Artesyn, Mean Well and others. Now you can save with our wider selection of products and highly competitive prices!

Company	Part Number	Unit Price	Jameco P/N	Jameco Price	Savings!	
Alli – –	628-0162	$72.55	155715CP	$34.95	$37.60	52%
Digi – –	EXQ60-48D05-3V3-R-ND	$142.00	218907CP	$134.95	$7.05	5%
Alli – –	831-1365	$95.68	218544CP	$64.95	$30.73	32%

Table-Top Power Supplies

See pages 49 and 50 for our complete selection.

Why pay more than double when you can get exactly what you're looking for at a better price? Feel assured you are saving significant sums of money, whether for a single or a bulk purchase.

Company	Part Number	Unit Price	Jameco P/N	Jameco Price	Savings!	
Digi-K – –	EPS112-ND	$107.00	155213CP	$34.95	$72.05	67%
Newa – –	95B1387	$96.96	155053CP	$54.95	$42.01	43%
Digi-K – –	EPS131-ND	$52.00	159353CP	$39.95	$12.05	23%
Newa – –	92B5763	$42.09	183054CP	$26.49	$15.60	37%

Wall Transformers (AC Adapters)

See pages 51 - 54 for our complete selection.

Our broad selection of wall transformers is available for same day delivery. Simply place your order before 6 pm EST and we'll get it shipped the same day. You'll get your order quick and you can feel assured you're getting the best value!

Company	Part Number	Unit Price	Jameco P/N	Jameco Price	Savings!	
Alli – –	928-6130	$17.06	100870CP	$7.95	$9.11	53%
Mous – –	412-112103	$8.69	196779CP	$7.79	$0.90	10%
Digi-K – –	T405-P5P-ND	$5.08	100853CP	$4.49	$0.59	12%
New – –	84F2071	$9.19	102277CP	$4.95	$4.24	46%

New – 26 Pages of Additional Power Products!

Now you should look to Jameco to supply your switching power and DC-to-DC converter needs. We just added 26 new pages of products, each full of the technical information you need to make decisions on this critical component. You'll also find more in-depth information, including output derating curves, package dimensions and specifications such as output ripple, regulation, certifications, and more; so you can be assured you made the right selection.

New Products – Different Location

Need a quicker way to find the new products we offer? Just turn to pages 207 – 213 for many of the new products this catalog offers. Be sure to check out this section for new tools, test equipment, solar

Computer Products

products, batteries and battery holders. Each offers the quality and value you expect from Jameco Electronics.

For power products, including switching power supplies and DC-to-DC converters, check out pages 5 – 43. We've also added IC's and other product line extensions throughout the catalog for your convenience.

Security

Tools

Test Equipment

Batteries & Battery Holders

Solar Products

P R I C E S

Color Code Legend
New Sale Qty. Save

3X, 3-Bulb Adjustable Magnifying Lamp

Adjustable rectangular 3-diopter lens allows independent movement of your lens for best lighting and viewing angles. Three 9-watt compact fluorescent bulbs located to the side and top of the lens provide superior lighting to your workspace or job at hand. Enclosed spring-balance arm reduces the chance of pinched hands from springs and arm movement, providing a sleek clean look.

- 47" long arm
- 2 on/off buttons
- Color: beige
- UL listed

Part No.	Description	1	10	25
217517CP	Adjustable magnifying lamp	$79.95	$74.95	$69.95

Wide View 2X Foldable Magnifier

This folding 2X magnifier is very popular among professionals needing a large view magnifier plus the convenience of portability. Made of high-quality plastic, the frame is light with a precision glass lens. An easy-to-read scale in both inches (scale of 1/16") and millimeters are etched on the base.

- Size (unfolded): 6.1"W x 5.3"D x 6.5"H

Part No.	Description	1	10
218296CP	Foldable magnifier $9.95	$8.95

GREAT VALUE!

3X Rectangle Magnifier Lamp

3x diopter rectangular magnifying lens provides a large viewing angle and compact design. With its two 9-watt fluorescent lamps located to the side of the lens, it provides superior lighting for any job. Enclosed springs in arms reduce the chance of pinched hands and make it easier to clean this unit.

- 47" long arm
- Color: beige
- UL listed

Part No.	Description	1	10	25
217509CP	Magnifying lamp	$69.95	$64.95	$59.95

Tweezers with 8X Magnifying Glass

The perfect combination hand tool for professionals working with small objects. Magnifying glass stays in perfect focus with tweezer heads.

- Stainless steel construction
- Precision tip tweezers
- 1.2" diameter 8 diopter lens
- Length: 3.8"

Part No.	Description	1	5
217824CP	Tweezer magnifier...................... $5.95	$5.39

Mini Thermo-Anemometer

Foldable housing extends 9" for better reach

Waterproof, pocket size with air velocity, temperature and windchill, all in one. Ideal for checking blowers, fans, exhaust hoods and balancing AC/HT ducts.

- Measures temperature and windchill from 0˚F to 122˚F (-18˚C to 50˚C)
- Measures wind speed in ft/min. MPH, m/s, km/h, knots and Beaufort force
- Large dual display for air velocity and temperature
- Auto shut-off 20 minutes after last key is pressed
- Water resistant housing floats and drop tested to 6'

Includes: CR2032 lithium battery and lanyard

Part No.	Description	1	5
218085CP	Mini thermo-anemometer $88.95	$84.49

Waterproof Thermometer

Waterproof housing allows thermometer to be completely submerged in water

- 2.75" stainless steel stem
- Digital display of 0.1˚ resolution
- ˚C/˚F switchable ranges -40˚F to 392˚F (-40˚C to 200˚C)
- MAX/MIN recall of high and low temperature
- HOLD and AUTO-OFF features

Includes: LR44 button battery and protective cover

Part No.	Description	Size	Weight (lbs.)	1	5
218077CP	Waterproof thermometer	5.9"L x 0.8"W x 0.7"T	0.1	$18.95	$17.95

2dB Sound Level Meter

Ideal instrument to measure OSHA compliance, equipment design, community sound ordinances and sound system installations.

- High & low measuring ranges: High: 75 to 130dB; Low: 35 to 90dB w/ 0.1dB res.
- A and C weighing
- Large: 05", 3½-digit display
- Meets ANSI and IEC 651 Type II standards
- Fast/slow response; max. hold with reset button
- Built in calibration check
- Utilizes a 0.49" condenser microphone
- Size: 9.5"L x 2.7"W x 1.0"T
- Weight: 0.5 lbs.

Includes: Hard vinyl case and 9V battery

Part No.	Description	1	5
218114CP	Digital decibel sound meter	$248.95	$236.49

10MHz to 4.5GHz Frequency Field Strength Meter

Totally Unique

Electromagnetic radiation is all around us, some of it good, some bad; but there's never been an easier, more portable device to detect and measure it, until the ZAP Checker. Now you can measure your microwave oven's emissions or take engineering measurements of HF, VHF, or UHF transmissions; ZAP Checker does it all. Its portability, multiple settings, ultra-high sensitivity and expanded bandwidth allows you to search out EMR whenever and wherever needed.

Part No.	Description	1	10
217808CP	ZAP Checker $129.95		$114.95

EXTECH INSTRUMENTS Heavy Duty pH/mV Temperature Meter

This is an ideal meter for field measurement of pH, millivolts and temperature with laboratory-quality accuracy at a very attractive price.

- Dual display for pH or mV and temperature
- Degrees C/F switchable
- Easy 2-point slope and cal adjustments at pH4 and pH7
- Minimum, maximum, and average recall
- Super-large LCD with contrast adjust
- Auto shutoff and data hold
- Low battery indicator
- Manual and auto temperature compensation using temp probe
- Size: 7.0"L x 2.9"W x 1.3"Thick • Weight: 0.8 lbs.

Part No.	Description	1	5
28157CP	Heavy duty temp. meter $168.95		$159.95
218131CP	Tripak buffers for calibration 24.95		23.69
218149CP	Vinyl carrying case 9.95		9.49

See pages 138 - 142 for other meters.

Insulation-Piercing Test Clips with Banana Jack

Makes contact with insulated wires without cutting or stripping insulation. Pierces insulation on wires from 22 to 14 AWG (0.030" through 0.180" diameter).

Part No.	Description	1	10	25
217453CP	Piercing clips $29.95	$27.95	$25.49	

More test leads on pages 144 & 145.

57-Piece Master Electronics Tool Kit

Simply every tool needed for field repair or installation. All in a handsome lockable case, with room for spare parts or special equipment.

Kit Includes 1 each:

- 5" & 6" side cutter
- 4.5" bent nose pliers
- 9.5" water pump pliers
- Testing driver
- Utility knife
- IC extractor
- Heat sink
- Solder wick
- 6-piece open-end wrench set
- PVC insulated tape
- Flashlight
- 6" stainless scissors
- Inspection mirror
- 30W ceramic soldering iron
- Utility component storage box
- 5" & 6" long nose pliers
- 8" combination pliers
- 9.5"crimping tool
- Alignment driver
- 6" tweezers
- 10' measuring ruler
- Oil can
- Soldering iron stand
- 6" adjustable wrench
- Brush
- 3-prong holder
- Parts tube
- Solder core
- 3-piece soldering aid kit
- Carpenter hammer
- 5-piece file set
- Desoldering pump
- 6-piece precision screwdrivers
- 7-piece folding type hex-key wrench
- PRO-SOFT duplex color screwdrivers: 4 Phillips screwdrivers (#0 x 75, #1 x 75, #2 x 38, & #2 x 100mm); 4 slotted screwdrivers (3 x 75, 5 x 75, 6 x 38, and 6 x 100mm); 2 nut drivers (5 and 6mm)
- Carrying case has two removable pallets, adjustable compartments, and combination locks

Part No.	Description	Case Size	Wt. (lbs.)	1	5
218245CP	Master electronic tool kit	18"W x 13"D x 4.0'H	16.0 .... $131.95		$117.95

27-Piece Technician's Tool Kit

All the essential technicians tools in a durable canvas carrying case. Just grab it and go!

Kit Includes 1 each:

- 7-piece folding type hex wrench (1.3, 1.5, 2.0, 2.5, 3.0, 4.0, 4.5)
- 5" precision range side cutting pliers
- 5.3" precision range long nose pliers
- Mini soldering iron stand with sponge
- Crystal slotted screwdrivers (3, 5, 6mm)
- Crystal Phillips screwdrivers (#0, #1, #2)
- Flat and round needle files
- 7-in-1 crimping tool
- Desoldering pump
- Solder wick
- Tweezers
- IC extractor tool
- Utility knife
- Mini flashlight
- 30W ceramic soldering iron
- Brush
- Solder core
- Electric tape
- Alignment driver
- Utility components box
- Digital multimeter
- 6" adjustable wrench
- Nut screwdriver (1/4")

Part No.	Description	Case Size	Wt. (lbs.)	1	5
218229CP	Technician's tool kit	16.2"W x 13.0"D x 3.0"H	7.1 .... $115.95		$104.95

25-Piece Field Repair Tool Kit and Briefcase

Two-in-one design allows user to carry a tool case and a briefcase in one. Features a separate case for tools that attaches to the briefcase with zippers.

Kit Includes 1 each:

- 5" diagonal cutting nippers
- 6" combination pliers
- 2-in-1 utility knife (saw and knife)
- 7-piece folding type hex wrench
- Tweezers
- Solder core
- 30W ceramic soldering iron
- 5" snipe nose pliers
- Alignment driver
- IC extractor
- 6" adjustable wrench
- 10' measuring tape
- Desoldering pump
- Crystal line screwdrivers: #0, #1, #2 Phillips; 3, 5, 6mm slotted

Part No.	Description	Case Size	Wt. (lbs.)	1	5
218211CP	Master electronic tool kit	14.2"W x 11.0"D x 4.7"H	6.6 .... $66.95		$58.95

See pages 152 & 153 for Jameco's selection of tools and tool kits.

The Jameco Advantage

Same Day Shipping – FREE!

99% of orders placed by 6 PM EST are shipped the same day, so you can have it quicker!

Low-Price Commitment

We'll match the advertised price of any like product. Just call us. It's that simple!

Around-the-Clock Ordering

Call us any time, day or night, weekday, weekend or holiday; at 1-800-831-4242 to place your order. Of course, you can order on the web too! www.Jameco.com

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While we don't intend to send multiple catalogs to the same person, on occasion we do make mistakes. If you're incorrectly receiving multiple catalogs, please visit our web site at www.Jameco.com/DupCats and we'll remove the duplicates. Alternatively, you can mail the duplicate back-covers to us:

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It's easy to open an account at Jameco. Simply give us a call and we'll take the information over the phone. If it's more convenient, we can fax you a credit application right away. And don't worry about time. Most applications are processed within minutes.

Just in Time Stocking – Get It at Jameco

Take advantage of our "Just In Time" fast delivery. Jameco has stocking levels that guarantee 99% in-stock availability, without the exceptions others may impose. Place your order any weekday before 6:00 PM EST, and you can be assured your order is on its way that day!

Our Low-Price Guarantee Doesn't Get Much Use…

… and we like it that way! But it is offered for a good reason. We take our pricing and product sourcing seriously, searching around the world to identify sources for the lowest prices and highest quality products.

We've Added Resources

Many of the products we offer have free technical documents online, so you don't have to wait for snail mail. And in addition to placing orders on the web, you can also request RMAs. For more information visit www.Jameco.com today!

Contact Information

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Identify Products Faster!

Looking for new products or great savings? Now you can find both faster with our simplified legend!

Color Code Legend
New Sale Qty. Save

Find New Products Quickly

Look for the part numbers in red. We added a complete line of power products, as well as hundreds of other products.

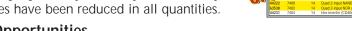| Part No.	Product No.
182991	RMH08LP

Save with Quantity Discounts

Buy in quantity and save! Corporate buyers will especially appreciate savings up to 62% off single unit prices. Look for products highlighted in green.

Part No.	Description	1	10
156785	Soldering station	$69.95	$62.95
156814	Sharp conical tip	4.95	4.49
134631	Replacement sponge	2.99	2.69

Save on Sale Items!

Sale products are highlighted in yellow, so you can identify items whose prices have been reduced in all quantities.

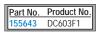| Product No.	Pins	Description	1	10
44222	7400	14	Quad 2-input NAND gate	$.49	$.39
63538	7402	14	Quad 2-input NOR gate	.19	.14
44231	7404	14	Hex inverter (CD4069)	.39	.35

Last Chance Opportunities

Unfortunately we're not always able to restock certain hard-to-find products. In this case we'll print blue part numbers, so if we know there's limited stock, you'll also know.

Part No.	Product No.
155643	DC603F1

Hard-to-Find Products

Some products are no longer produced, and yet we know you need them. That's why we occasionally offer pulled or refurbished products. Pulled part numbers are clearly printed in purple and refurbished in brown. Each is backed by our standard Jameco warranty.
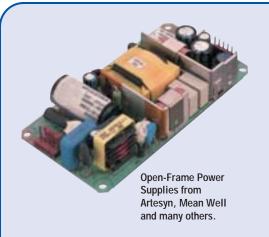
Part No.	Product No.
121232	AW10D1GA

Part No.	Product No.
25101	MC146818

Switching Power Supplies
for Every Application

Open-Frame Power
Supplies from
Artesyn, Mean Well
and many others.

For many years, Jameco has been known as a leading source of power supply products, providing high levels of personalized service to customers with modest quantity requirements.

Jameco continues to expand its commitment to switching power supplies. In addition to offering 26 new pages of power products, new name brands and great savings, we're providing more of the information you need to make good engineering decisions. And if

Enclosed Power Supplies
from 10 to 1,000 Watts.

you have on-going needs, be sure to ask for an Inside Sales representative. You'll be assigned to the same rep order after order, so you can be assured we'll be aware of your unique requirements.

Name Brands You Can Trust

Jameco has greatly expanded its line of switching power supplies to better serve your needs. Not only have we signed a new distribution agreement with U.S. branded Artesyn Technologies, one of the world's top suppliers of power products, we have also significantly expanded our value-priced, high-quality line from Mean Well.

ARTESYN
TECHNOLOGIES

Now you can get immediate delivery of many popular Artesyn products and avoid the hassles of going through "large company" distribution channels. Be sure to see pages 6-31 for Artesyn's and Mean Well's switching power supplies, and pages 33-43 for Artesyn's and Mean Well's world-renowned DC-to-DC converters.
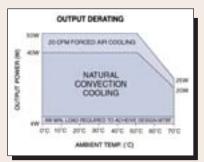
Save More in Larger Quantities!

Looking to save even more? We already guarantee the lowest price, but you can save even more when you purchase in larger quantities! Simply call us at 1-800-831-4242, ask for an Inside Sales rep, and let us know your specific requirements. Our Inside Sales representatives are there to get you the best value on your quantity purchases, and they'll make sure you get any additional service and information you need!

Save with Limited Supply Items

In addition to providing you with products suitable for long-term production runs, Jameco also continues to offer limited-supply products at great savings. We've negotiated great deals for these limited availablility supplies, and you can be assured we're passing the savings on to you. All of our power products are backed by Jameco's 90-day warranty.

Make Technical Selections from the Catalog

As part of our commitment to the expanding power supply line, we have added additional information to help you make informed technical decisions. Now you have more in-depth information, including output derating curves, package dimensions and specifications including output ripple, regulation, certifications, and more. Plus, the charts in this catalog allow you to easily

compare specifications of multiple manufacturers' products.

Need more help deciding? You can always call our toll-free tech support hot-line at 1-800-831-4242.

Dimensions

Our senior technicians are available to help solve your power supply challenges.

Not sure of the meaning of a power supply term? We've featured numerous explanations throughout the power section offering the definition of the terms used in this catalog and the industry.

UNDERSTANDING POWER SUPPLIES #3

P.F.C. POWER FACTOR CORRECTION: Standard AC/DC converters draw line current in pulses around the peaks in line voltage. This may be undesirable for several reasons. PFC circuits ensure that the line current is drawn sinusoidally and in phase with the sinusoidal line voltage.

Color Code Legend
New Sale Qty. Save
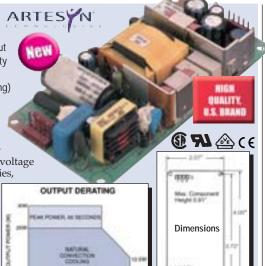
POWER

25-Watt Open Frame
NLP-25 Series: Single & Triple Outputs

- 100% full-load burn-in
- Universal AC input
- 1U Package: 4" x 2.1" x 0.9"
- Two-year warranty
- 3.3 watts/in³
- 0°C to +50°C working temp. (see output derating)
- Mating connectors: P/Ns 104432CP & 104723CP, pg 125

Detailed below in blue, the NLP25 series provides 25W of power with free-air convection cooling that can peak at 30W for 60 seconds. Standard features include over-voltage and short-circuit protection. The NLP25 series, with full international safety approvals and the CE mark, meets conducted and radiated emissions EN55022 level B and complies to EN61000-4-2/3/4/5/6 immunity standards.

The NLP25 series is perfect for use in off-line, low-power data networking and computer applications with limited space. Examples include hubs, routers, POS terminals, external disk storage and cable modems.

25-Watt Open Frame
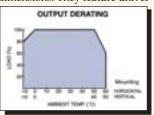### PS-25 & PD-25 Series: Single & Dual Outputs

- 100% full-load burn-in
- Universal AC input
- 2.1 watts/in³
- Two-year warranty
- 105°C output capacitor
- Mating conn.: P/Ns 104432CP & 104715CP, pg 125
- -10°C to +60°C working temp (see output derating)

Shown below in buff color, the Mean Well PS-25 & PD-25 series are low-cost, high-quality open-frame 25-watt switchers that can be used for many lower-power commercial applications, both single and dual-output. Full rated power is available with free-air convection cooling in an industry-standard package size and mounting dimensions. They feature universal input and numerous features such as short-circuit, over-voltage, overload and over-temperature protection.
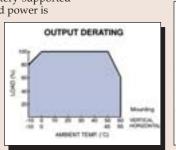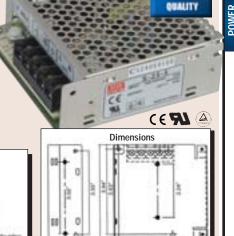
25-Watt Enclosed
S-25 Series: Single Output

- 100% full-load burn-in
- Universal AC input
- No minimum load required
- 1.2 watts/in³
- 105°C output capacitor
- Two-year warranty
- Mating connectors: 103587CP, pg 119
- -10°C to +60°C working temp (see output derating)

Highlighted below in tan, the Mean Well S-25 series are low-cost, high-quality enclosed switchers that feature universal input of 85 to 264VAC, as well as 120 to 370VDC for battery-supported applications. Full rated power is available with free-air convection cooling. Protections include short-circuit, over-voltage and overload with auto-recovery. They are approved by UL and TUV, and carry the CE mark for use worldwide.

	Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Open Frame	Artesyn	NLP25-7605	+5V@0-5A	25.0W	90-264@47-440	see diagram	see diagram	3.31	50	2.0	2.0		—	3,000	0.4	—	5	5-500Hz, 2.4G	—	70	150,000	0.3	UL/CSA/VDE/CE	218472CP	$41.29	$35.29	$33.29
	Artesyn	NLP25-7612	+12V@0-2.08A	25.0W	90-264@47-440	see diagram	see diagram	3.31	120	2.0	2.0		—	3,000	0.4	—	5	5-500Hz, 2.4G	—	70	150,000	0.3	UL/CSA/VDE/CE	218481CP	41.29	35.29	33.29
	Artesyn	NLP25-7624	+24V@0-1.04A	25.0W	90-264@47-440	see diagram	see diagram	3.31	150	2.0	2.0		—	3,000	0.4	—	5	5-500Hz, 2.4G	—	70	150,000	0.3	UL/CSA/VDE/CE	218499CP	41.29	35.29	33.29
	Artesyn	NLP25-7608	+5V@0.2-2A; +12V@0.1-0.8A; -12V@0-0.1A	20.8W	90-264@47-440	see diagram	see diagram	2.75	—	2.0	2.0		—	3,000	0.4	—	5	5-500Hz, 2.4G	—	70	150,000	0.3	UL/CSA/VDE/CE	218501CP	41.29	35.29	33.29
	Mean Well	PS-25-3.3	+3.3V@0-5A	16.5W	85-264@47-63	see diagram	see diagram	1.32	80	2.5	0.5		40	3,000	0.5	30	17	10-500Hz, 2G	—	66	576,000	0.3	UL/CUL/TUV/CE	212361CP	18.95	17.95	17.19
	Mean Well	PS-25-5	+5V@0-5A	25.0W	85-264@47-63	see diagram	see diagram	2.06	80	2.0	0.5		40	3,000	0.5	30	17	10-500Hz, 2G	—	74	576,000	0.3	UL/CUL/TUV/CE	212353CP	18.95	17.95	17.19
	Mean Well	PS-25-12	+12V@0-2.1A	25.2W	85-264@47-63	see diagram	see diagram	2.08	100	1.0	0.3		40	3,000	0.5	30	17	10-500Hz, 2G	—	78	576,000	0.3	UL/CUL/TUV/CE	148603CP	18.95	17.95	17.19
	Mean Well	PS-25-15	+15V@0-1.7A	25.5W	85-264@47-63	see diagram	see diagram	2.11	100	1.0	0.3		40	3,000	0.5	30	17	10-500Hz, 2G	—	78	576,000	0.3	UL/CUL/TUV/CE	216768CP	18.95	17.95	17.19
	Mean Well	PS-25-24	+24V@0-1A	24.0W	85-264@47-63	see diagram	see diagram	1.98	240	0.5	0.2		40	3,000	0.5	30	17	10-500Hz, 2G	—	79	576,000	0.3	UL/CUL/TUV/CE	212345CP	18.95	17.95	17.19
	Mean Well	PD-2505	+5V@0.1-3A; -5V@0.1-2.5A	25.0W	85-264@47-63	see diagram	see diagram	2.06	50	4.0	1.0		40	3,000	0.5	30	16	10-500Hz, 2G	—	73	507,000	0.3	UL/CUL/TUV/CE	212311CP	19.95	18.95	17.95
	Mean Well	PD-25A	+5V@0.2-2.5A; +12V@0.1-1.5A	25.0W	85-264@47-63	see diagram	see diagram	2.06	50	1.0	0.5		40	3,000	0.5	30	16	10-500Hz, 2G	—	71	507,000	0.3	UL/CUL/TUV/CE	212337CP	19.95	18.95	17.95
	Mean Well	PD-25B	+5V@0.2-2A; +24V@0.1-1A	25.2W	85-264@47-63	see diagram	see diagram	2.08	50	1.0	0.5		40	3,000	0.5	30	16	10-500Hz, 2G	—	77	507,000	0.3	UL/CUL/TUV/CE	212329CP	19.95	18.95	17.95
	Mean Well	PD-2512	+12V@0.1-1.2A; -12V@0.1-1A	24.0W	85-264@47-63	see diagram	see diagram	1.98	50	3.0	0.5		40	3,000	0.5	30	16	10-500Hz, 2G	—	74	507,000	0.3	UL/CUL/TUV/CE	148689CP	19.95	18.95	17.95
Enclosed	Mean Well	S-25-5	+5V@0-5A	25.0W	85-264@47-63	see diagram	see diagram	1.17	50	1.0	0.5		15	3,000	0.75	50	10	10-500Hz, 2G	—	72	330,000	0.8	UL/TUV/CE	123246CP	39.95	35.95	25.49
	Mean Well	S-25-12	+12V@0-2.1A	25.2W	85-264@47-63	see diagram	see diagram	1.18	100	0.5	0.5		15	3,000	0.75	50	10	10-500Hz, 2G	—	76	330,000	0.8	UL/TUV/CE	123254CP	39.95	35.95	25.49
	Mean Well	S-25-15	+15V@0-1.7A	25.5W	85-264@47-63	see diagram	see diagram	1.20	100	0.5	0.5		15	3,000	0.75	50	10	10-500Hz, 2G	—	77	330,000	0.8	UL/TUV/CE	123262CP	39.95	35.95	25.49
	Mean Well	S-25-24	+24V@0-1.1A	26.4W	85-264@47-63	see diagram	see diagram	1.24	100	0.5	0.5		15	3,000	0.75	50	10	10-500Hz, 2G	—	80	330,000	0.8	UL/TUV/CE	123271CP	39.95	35.95	25.49

Other Versions Available: Call 800-831-4242

* Primary Output

	Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
									Limited Supply – Special Offers – 90-Day Warranty																		
Open Frame	Skynet	SNP-0502-B	+5V@0-2A	10.0W	115/230@50-60	4.4x1.6x0.8	4.0x1.3x0.14	1.78	50	1.0	1.0		30	—	—	—	—	—	—	70	150,000	0.2	UL/CUL/TUV	184866CP	$10.95	$9.95	$8.95
	CINCO	CFM2001S	+5V@4.4A	20.0W	100-240@50-60	3.5x2.0x0.7	3.2x1.7x0.13	4.08	50	1.0	0.5		20	3,000	—	—	16	—	—	73	—	1.3	UL/CUL/TUV/CE	203422CP	8.95	7.95	6.95
	Condor	GSC2024	+24V@0.85A	20.0W	100-240@50-60	3.5x2.0x0.8	3.0x1.7x0.12	3.57	180	0.2	—		32	—	0.36	—	15	—	—	70	—	0.3	UL/CSA/TUV	196664CP	10.05	8.05	6.05
	Tamura	79642191	+5V@1A; +12V@1A	17.0W	120/230@50-60	4.7x2.4x1.1	—	1.37	—	—	—		—	—	—	—	—	—	—	—	—	0.4	—	189747CP	8.95	7.19	5.39
	AUTEC	UPS20-2002	+5V@1A; +12V@1.5A	23.0W	115/230@50-50	5.0x3.0x1.1	5.1x1.6x0.16	1.39	50	2.0	1.0		20	—	—	—	20	—	—	68	—	0.5	UL/CSA/TUV	173374CP	8.95	7.19	5.39
	Super Mac	U002512010	+5V@2.5A; +12V@1A	24.5W	100-240@50-60	3.7x2.5x1.2	—	2.21	—	—	—		—	—	—	—	—	—	—	—	—	0.4	UL/CSA/TUV	166967CP	12.95	10.99	8.25
	ST	G25AC-51333	+5.1V@3A; +12.5V@0.75A; +33.3V@0.02A	25.0W	120@60	4.0x2.2x1.3	—	2.19	—	—	—		—	—	—	—	—	—	—	—	—	0.5	UL	210770CP	7.95	7.19	6.49
Enclosed	Volgen	EXU-120R9	+12V@0.9A	10.0W	100/120@50-60	3.7x2.9x0.9	2.3x1.7x0.08	1.04	—	0.8	0.4		30	—	1.0	200	—	10-55Hz, 20G	10	72	—	0.4	UL/CSA	205719CP	12.95	11.69	10.49
	Volgen	EXU-150R7	+15V@0.7A	10.0W	100/120@50-60	3.7x2.9x0.9	2.3x1.7x0.08	1.04	—	0.8	0.4		30	—	1.0	200	—	10-55Hz, 20G	10	72	—	0.4	UL/CSA	205751CP	12.95	11.69	10.49
	Volgen	EXU-15001	+15V@1A	15.0W	100/120@50-60	4.4x2.9x0.9	2.3x1.7x0.08	1.31	—	0.8	0.4		30	—	1.0	200	—	10-55Hz, 20G	10	67	—	0.4	UL/CSA	205727CP	14.95	13.49	12.15
	Volgen	EXU-240R5	+24V@0.45A	10.0W	100/120@50-60	3.7x2.9x0.9	2.3x1.7x0.08	1.04	—	0.8	0.4		30	—	1.0	200	—	10-55Hz, 20G	10	72	—	0.4	UL/CSA	205760CP	12.95	11.69	10.49
	Volgen	PRK15U-0512W	+5V@2.5A; +12V@0.7A	16.0W	120@50-60	4.6x3.2x1.1	4.0x2.5x0.08	0.99	100	1.0	0.4		12	—	1.0	100	20	10-55Hz, 20G	5	64	—	0.5	UL/CSA	208952CP	14.95	13.49	12.15
	Volgen	PRK15U-0524W	+5V@2.5A; +24V@0.4A	15.0W	120@50-60	4.6x3.2x1.1	4.0x2.5x0.08	0.93	100	1.0	0.4		12	—	1.0	100	20	10-55Hz, 20G	5	64	—	0.5	UL/CSA	208961CP	14.95	13.49	12.15
	Volgen	PRK15U-1212W	+12V@1A; +12V@0.5A	15.0W	100/120@50-60	5.2x3.2x1.1	4.0x2.5x0.08	0.82	170	1.0	0.4		12	—	1.0	100	20	10-55Hz, 20G	5	64	—	0.4	UL/CSA	205794CP	14.95	13.49	12.15

* Primary Output
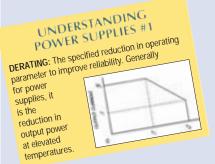
Color Code Legend
New Sale Qty. Save Closeout

POWER

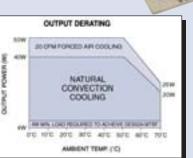## 40-Watt Open Frame

NFS-40 Series: Single & Triple Outputs

- 100% full-load burn-in
- No minimum load required
- 50 watts with 20 CFM of air
- 1U Package: 5" x 3" x 1.2"
- Mating connectors: P/Ns 104432CP & 104731CP, pg 125
- 0° to +70°C working temperature (see output derating)
- Universal AC input
- 2.2 watts/in³
- Two-year warranty

ARTESYN TECHNOLOGIES

HIGH QUALITY. U.S. BRAND

Detailed below in blue, the Artesyn NFS40 series are industry-standard 40W power supplies with the capability to supply 50 watts with forced air cooling and to automatically operate from any input voltage from 85 to 264VAC. Over-voltage and short-circuit protection are standard features. The NFS40 is ideal for use in equipment installed around the world because of its UL, CSA, VDE, EN60950 and IEC 950 approvals. These low-profile switchers with high power density are perfect for use in small digital systems of all types.

New

UNDERSTANDING POWER SUPPLIES #1

DERATING: The specified reduction in operating parameter to improve reliability. Generally for power supplies, it is the reduction in output power at elevated temperatures.

OUTPUT DERATING

Dimensions

40-Watt Enclosed

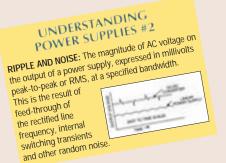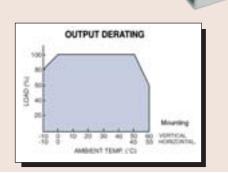### S-40 & T-40 Series: Single & Triple Output

- 100% full-load burn-in
- 1.3 watts/in³
- 105°C output capacitor
- Mating connectors: 103587CP, pg 119
- -10°C to +60°C working temperature (see output derating)
- Universal AC input
- Two-year warranty

MW MEAN WELL

VALUE PRICED. HIGH QUALITY

Highlighted in tan below, the S-40 and T-40 series from Mean Well derive their impressive reliability from a conservative design, the exclusive use of high-quality components, and 100% full-load burn-in. Assured to operate correctly anywhere in the world, these switchers feature universal input voltage ranges of 85-264VAC and 120-370VDC. Protection includes short-circuit, overload and over-voltage; and a novel soft-start circuit limits the AC surge current. Manufacturer guaranteed safety standards comprise UL1012, UL1950 and TUV EN60950; and these products have earned the European CE mark.
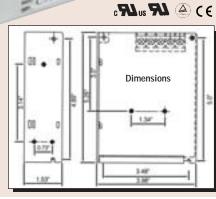
UNDERSTANDING POWER SUPPLIES #2

RIPPLE AND NOISE: The magnitude of AC voltage on the output of a power supply, expressed in millivolts peak-to-peak or RMS, at a specified bandwidth. This is the result of feed-through of the rectified line frequency, internal switching transients and other random noise.

OUTPUT DERATING

Dimensions

	Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	Price 10	Price 50	
Open Frame	Artesyn	NFS40-7605	+5.1V@0-6A	30.6W	85-264@47-440	see diagram	see diagram	1.70	100	2.0	0.2		12	3,000	0.32	—	14	5-500Hz, 2.4G	5	70	170,000	0.6	UL/CSA/VDE/CE	218510CP	$52.95	$45.25	$42.55	Open Frame
	Artesyn	NFS40-7612	+12V@0-3.3A	39.6W	85-264@47-440	see diagram	see diagram	2.20	120	2.0	0.2		12	3,000	0.32	—	14	5-500Hz, 2.4G	5	70	170,000	0.6	UL/CSA/VDE/CE	218528CP	52.95	45.25	42.55	
	Artesyn	NFS40-7624	+24V@0-1.6A	38.4W	85-264@47-440	see diagram	see diagram	2.13	240	2.0	0.2	↔	12	3,000	0.32	—	14	5-500Hz, 2.4G	5	70	170,000	0.6	UL/CSA/VDE/CE	218536CP	52.95	45.25	42.55	
	Artesyn	NFS40-7608	+5V@0-3A; +12V@0-2A; -12V@0-0.35A	43.2W	85-264@47-440	see diagram	see diagram	2.40	50	2.0	0.2		12	3,000	0.32	—	14	5-500Hz, 2.4G	5	70	170,000	0.6	UL/CSA/VDE/CE	190086CP	52.95	45.25	42.55	
	Artesyn	NFS40-7610	+5V@0-3A; +15V@0-2A; -15V@0-0.35A	50.2W	85-264@47-440	see diagram	see diagram	2.79	50	2.0	0.2		12	3,000	0.32	—	14	5-500Hz, 2.4G	5	70	170,000	0.6	UL/CSA/VDE/CE	218552CP	52.95	45.25	42.55	
Enclosed	Mean Well	S-40-5	+5V@0-8A	40.0W	85-264@47-63	see diagram	see diagram	1.34	75	1.0	0.5		60	3,000	1.0	50	15	10-500Hz, 2G	10	72	314,000	1.0	UL/CUL/TUV/CE	123289CP	44.95	39.95	29.95	Enclosed
	Mean Well	S-40-12	+12V@0-3.5A	42.0W	85-264@47-63	see diagram	see diagram	1.41	100	0.5	0.5		30	3,000	1.0	50	15	10-500Hz, 2G	10	76	314,000	1.0	UL/CUL/TUV/CE	123297CP	44.95	39.95	29.95	
	Mean Well	S-40-15	+15V@0-2.8A	42.0W	85-264@47-63	see diagram	see diagram	1.41	100	0.5	0.5		30	3,000	1.0	50	15	10-500Hz, 2G	10	76	314,000	1.0	UL/CUL/TUV/CE	202139CP	44.95	39.95	29.95	
	Mean Well	S-40-24	+24V@0-1.8A	43.0W	85-264@47-63	see diagram	see diagram	1.44	100	0.5	0.5	↔	30	3,000	1.0	50	15	10-500Hz, 2G	10	78	314,000	1.0	UL/CUL/TUV/CE	123318CP	44.95	39.95	29.95	
	Mean Well	T-40A	+5V@0.6-3A; +12V@0.2-2A; -5V@0.1-0.5A	41.5W	85-264@47-63	see diagram	see diagram	1.43	100	0.5	0.5		20	3,000	3.5	50	16	10-500Hz, 2G	10	72	305,600	1.0	UL/CUL/CE	201988CP	49.95	44.95	32.69	
	Mean Well	T-40B	+5V@0.6-3A; +12V@0.2-2A; -12V@0.1-0.5A	45.0W	85-264@47-63	see diagram	see diagram	1.55	100	0.5	0.5		20	3,000	3.5	50	16	10-500Hz, 2G	10	72	305,600	1.0	UL/CUL/CE	201996CP	49.95	44.95	32.69	
	Mean Well	T-40C	+5V@0.6-3A; +15V@0.2-1.5A; -15V@0.1-0.5A	45.0W	85-264@47-63	see diagram	see diagram	1.55	100	0.5	0.5		20	3,000	3.5	50	16	10-500Hz, 2G	10	72	305,600	1.0	UL/CUL/CE	202008CP	49.95	44.95	32.69	

Other Versions Available: Call 800-831-4242

* Primary Output

Limited Supply – Special Offers – 90-Day Warranty

SALE　　　SALE

|	Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	Size Inches (LxWxH)	Mounting Hole Size (In.) (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @250VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	Price 10	Price 50	
Open Frame	Power-One	MAP42-1005	+5V@0-8A	40.0W	120-240@50-60	5.0x3.0x1.3	4.6x2.6x0.16	2.05	50	1.0	0.2		38	2,600	0.5	20	15	10-2kHz, 6G	10	70	311,000	0.6	UL/CSA/TUV/CE	210841CP	$19.95	$14.99	$10.49	Open Frame
	Autec	UPS40-1002	+5V@0.2-3A; +12V@0.1-2A	40.0W	115/230@50-60	7.0x2.0x1.2	6.6x1.6x0.16	2.38	50	3.0	0.5		20	3,600	—	—	—	—	—	65	—	0.5	UL/CSA/TUV	173551CP	8.95	6.99	5.25	
	Skynet	SNP-9031	+5V@0-2A; +12V@0-1.5A; -12V@0-0.3A	31.6W	115/230@50-60	5.1x2.8x1.1	4.7x2.4x0.16	2.01	50	1.0	1.0	↔	30	—	—	—	16	—	—	70	—	0.3	UL/CSA/VDE	210788CP	9.95	8.95	7.95	
	Astec	BM41012	+5V@3.75A; +12V@1.5A; -12V@0.4	41.0W	115@50-60	6.4x3.2x1.7	—	1.18	—	—	—		—	—	—	—	—	—	—	—	—	1.0	UL/CSA/VDE	28927CP	3.29	2.99	2.75	
	Samsung	PSPL430201A	+5V@5A; 12V@1.5A			100-120@50-60	6.1x2.1x1.0	3.28	—	—	—		—	—	—	—	—	—	—	—	—	0.6	UL/CUL	163985CP	14.95	11.99	8.99	
	Power-One	SPL40-4000	+5V@5A; +12V@0.5A; -5V@0.5A; -12V@0.5A	40.0W	115/230@47-63	6.4x3.9x1.7	4.8x3.2x0.16	0.94	50	1.0	0.3		9	—	—	—	20	—	1	70	—	0.8	UL/CSA/VDE	204599CP	19.95	17.95	16.19	
Enclosed	Volgen	EXU-5006	+5V@6A	30.0W	120@50-60	4.7x2.9x1.4		1.57	—	0.8	0.4	↔	30	2,000	0.5	200	—	10-55Hz, 2G	10	76	—	0.6	UL/CSA	208944CP	19.95	17.99	16.19	Enclosed
	Volgen	MRE-05006U	+5V@6A	30.0W	115/240@50-60	6.2x3.9x1.4		1.47	100	0.8	0.4		—	3,000	0.7	200	—	10-55Hz, 20G	10	—	—	0.5	UL/CSA/TUV	205882CP	19.95	17.99	16.19	
	Volgen	EXU-15002	+15V@2A	30.0W	100/120@50-60	5.4x2.9x1.3	3.9x1.3x0.12	1.47	—	0.8	0.4		30	2,000	0.5	200	—	10-55Hz, 2G	10	76	—	0.5	UL/CSA	205735CP	19.95	17.99	16.19	
	Volgen	MRE-15002U	+15V@2A	30.0W	115/240@50-60	6.1x3.9x1.5	2.2x1.8x0.08	0.84	200	0.8	0.4		22	3,000	0.7	200	—	10-55Hz, 20G	10	—	—	0.5	UL/CSA/TUV	205866CP	19.95	17.99	16.19	
	Volgen	EXU-480R6	+48V@0.6A	30.0W	100/120@50-60	5.4x2.9x1.3	3.9x1.3x0.12	1.47	—	0.8	0.4	↔	30	2,000	0.5	200	—	10-55Hz, 2G	10	76	—	0.5	UL	205778CP	19.95	17.99	16.19	
	Volgen	PRK30U-0512W	+5V@3A; +12V@1.2A	30.0W	100/120@50-60	6.3x3.6x1.5	4.0x2.5x0.08	0.88	100	1.0	0.4		35	1,500	0.5	100	20	10-55Hz, 2G	5	75	—	0.6	UL/CSA	205807CP	19.95	17.99	16.19	
	Volgen	PRK30U-0524W	+5V@3A; +24V@0.6A	30.0W	100/120@50-60	6.3x3.6x1.5	4.0x2.5x0.08	0.88	100	1.0	0.4		35	1,500	0.5	100	20	10-55Hz, 2G	5	75	—	0.6	UL/CSA	205815CP	19.95	16.19	16.19	
	Volgen	PRK30U-1212W	+12V@1A; +12V@1A	30.0W	100/120@50-60	6.3x3.6x1.5	4.0x2.5x0.08	0.88	170	1.0	0.4		35	1,500	0.5	100	20	10-55Hz, 2G	5	75	—	0.6	UL/CSA	205823CP	19.95	17.99	16.19	

* Primary Output

POWER
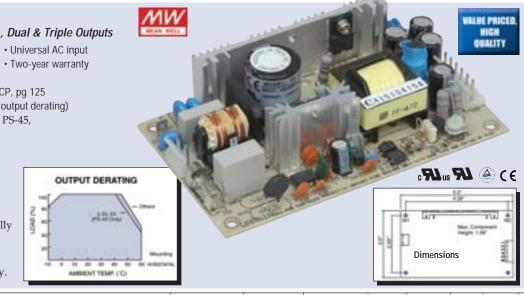
45-Watt Open Frame
PS-45, PD-45 & PT-45 Series: Single, Dual & Triple Outputs

- 100% full-load burn-in
- 2.5 watts/in³
- 105˚C output capacitor
- Mating connectors: 104432CP & 104731CP, pg 125
- -10˚C to +60˚C working temperature (see output derating)
- Universal AC input
- Two-year warranty

Detailed in blue below, the Mean Well PS-45, PD-45 and PT-45 series offer excellent performance with high reliability in a small power-frame package. These 45-watt switchers support full output power with free-air convection cooling. The high-reliability open-frame package features industry-standard mounting dimensions and only 1.1" component height. Intended for virtually any medium power-application, these units provide short-circuit and over-voltage protection, as well as overload protection with auto-recovery.
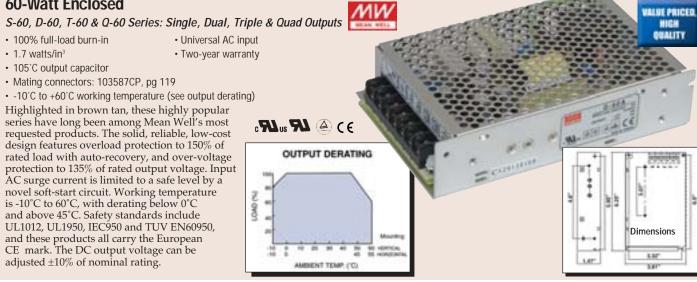
OUTPUT DERATING

Dimensions

60-Watt Enclosed
S-60, D-60, T-60 & Q-60 Series: Single, Dual, Triple & Quad Outputs

- 100% full-load burn-in
- 1.7 watts/in³
- 105˚C output capacitor
- Mating connectors: 103587CP, pg 119
- -10˚C to +60˚C working temperature (see output derating)
- Universal AC input
- Two-year warranty

Highlighted in brown tan, these highly popular series have long been among Mean Well's most requested products. The solid, reliable, low-cost design features overload protection to 150% of rated load with auto-recovery, and over-voltage protection to 135% of rated output voltage. Input AC surge current is limited to a safe level by a novel soft-start circuit. Working temperature is -10˚C to 60˚C, with derating below 0˚C and above 45˚C. Safety standards include UL1012, UL1950, IEC950 and TUV EN60950, and these products all carry the European CE mark. The DC output voltage can be adjusted ±10% of nominal rating.

OUTPUT DERATING

Dimensions

	Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @250VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Open Frame	Mean Well	PS45-5	+5V@0-8A	40.0W	90-264@47-440	see diagram	see diagram	2.22	100	3.0	1.0		20	3,000	0.5	30	20	10-500Hz; 2G	10	74	300,000	0.5	UL/CUL/TUV/CE	217331CP	$27.95	$25.19	$19.95
	Mean Well	PS45-12	+12V@0-3.7A	44.4W	90-264@47-440	see diagram	see diagram	2.47	100	2.0	1.0		20	3,000	0.5	30	20	10-500Hz; 2G	10	76	300,000	0.5	UL/CUL/TUV/CE	213727CP	27.95	25.19	19.95
	Mean Well	PS45-24	+24V@0-1.9A	45.6W	90-264@47-440	see diagram	see diagram	2.53	100	2.0	1.0	←→	20	3,000	0.5	30	20	10-500Hz; 2G	10	78	300,000	0.5	UL/CUL/TUV/CE	213719CP	27.95	25.19	19.95
	Mean Well	PS45-48	+48V@0-1A	48.0W	90-264@47-440	see diagram	see diagram	2.67	100	2.0	1.0		20	3,000	0.5	30	20	10-500Hz; 2G	10	78	300,000	0.5	UL/CUL/TUV/CE	213701CP	27.95	25.19	19.95
	Mean Well	PD45A	+5V@0.4-3.2A; +12V@0.2-2	40.0W	90-264@47-440	see diagram	see diagram	2.42	50	3.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	77	288,000	0.5	UL/CUL/TUV/CE	194861CP	32.95	29.69	20.79
	Mean Well	PD45B	+5V@0.4-3.2A; +24V@0.2-1.2A	44.8W	90-264@47-440	see diagram	see diagram	2.72	50	3.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	78	300,000	0.5	UL/CUL/TUV/CE	194870CP	32.95	29.69	20.79
	Mean Well	PT45B	+5V@0.4-3A; +12V@0.2-2A; -12V@0-0.3A	45.0W	90-264@47-440	see diagram	see diagram	1.88	50	3.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	75	262,000	0.5	UL/CUL/TUV/CE	88401CP	34.95	31.49	21.95
Enclosed	Mean Well	S-60-5	+5V@0-12A	60.0W	85-264@47-63	see diagram	see diagram	1.67	120	1.0	0.5		30	3,000	3.5	50	20	10-500Hz; 2G	10	73	316,000	1.2	UL/CUL/TUV/CE	123326CP	52.95	47.69	33.19
	Mean Well	S-60-12	+12V@0-5A	60.0W	85-264@47-63	see diagram	see diagram	1.67	120	0.5	0.5	←→	30	3,000	3.5	50	20	10-500Hz; 2G	10	76	316,000	1.2	UL/CUL/TUV/CE	123334CP	52.95	47.69	33.19
	Mean Well	S-60-15	+15V@0-4A	60.0W	85-264@47-63	see diagram	see diagram	1.67	150	0.5	0.5		30	3,000	3.5	50	20	10-500Hz; 2G	10	77	316,000	1.2	UL/CUL/TUV/CE	123342CP	52.95	47.69	33.19
	Mean Well	S-60-24	+24V@0-2.5A	60.0W	85-264@47-63	see diagram	see diagram	1.67	150	0.5	0.5		30	3,000	3.5	50	20	10-500Hz; 2G	10	79	316,000	1.2	UL/CUL/TUV/CE	123351CP	52.95	47.69	33.19
	Mean Well	D-60A	+5V@0.3-4A; +12V@0.2-3A	56.0W	85-264@47-63	see diagram	see diagram	1.56	75	0.5	0.5		30	3,000	1.0	50	20	10-500Hz; 2G	10	73	301,000	1.2	UL/CUL/TUV/CE	123457CP	54.95	49.95	35.09
	Mean Well	D-60B	+5V@0.3-3A; +24V@0.2-1.8A	58.0W	85-264@47-63	see diagram	see diagram	1.62	75	0.5	0.5		30	3,000	1.0	50	20	10-500Hz; 2G	10	76	301,000	1.2	UL/CUL/TUV/CE	123465CP	54.95	49.95	35.09
	Mean Well	T-60A	+5V@0.5-5A; +12V@0.2-2.5A; -5V@0-0.5A	57.5W	85-264@47-63	see diagram	see diagram	1.60	100	1.0	0.5	←→	30	3,000	1.0	50	20	10-500Hz; 2G	10	72	281,000	1.2	UL/CUL/TUV/CE	123473CP	54.95	49.95	34.49
	Mean Well	T-60B	+5V@0.5-5A; +12V@0.2-2.5A; -12V@0-0.5A	61.0W	85-264@47-63	see diagram	see diagram	1.70	100	1.0	0.5		30	3,000	1.0	50	20	10-500Hz; 2G	10	72	281,000	1.2	UL/CUL/TUV/CE	123481CP	54.95	49.95	34.49
	Mean Well	T-60C	+5V@0.5-5A; +15V@0.2-2A; -15V@0-0.5A	62.5W	85-264@47-63	see diagram	see diagram	1.61	100	1.0	0.5		30	3,000	1.0	50	20	10-500Hz; 2G	10	72	281,000	1.2	UL/CUL/TUV/CE	123490CP	54.95	49.95	34.49
	Mean Well	Q-60B	+5V@0.5-5.5A; +12V@0.1-2A; -5V@0-0.5A; -12V@0-0.5A	60.0W	85-264@47-63	see diagram	see diagram	1.63	100	0.5	0.5		18	3,000	1.0	20	12	10-500Hz; 2G	10	70	284,000	1.2	UL/CUL	147045CP	59.95	53.95	38.49

Other Versions Available: Call 800-831-4242

* Primary Output

Limited Supply – Special Offers – 90-Day Warranty   Limited Supply – Special Offers – 90-Day Warranty

	Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	Size Inches (LxWxH)	Mounting Hole Size (In.) (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @250VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Open Frame	DVE	DSP-453A-6	+5V@9A	45.0W	100-250@47-63	5.0x3.0x1.1	4.6x2.6x0.14	2.73	—	5.0	—		—	—	—	—	—	—	—	70	—	0.6	UL/CSA/TUV	203414CP	$9.95	$8.95	$8.95
	Digital Power	US550-105	+5V@0.1-10A	50.0W	90-250@47-63	5.0x3.0x1.1	4.6x2.6x0.15	3.03	50	3.0	0.2		25	—	—	—	8	5-500Hz; 0.75G	—	75	280,000	0.5	UL/CUL/CSA/TUV/CE	204556CP	19.95	17.99	16.19
	Delta	SMP-43EP-10A	+5V@8A; +12V@0.5	46.0W	100-240@50-60	5.0x3.0x1.3	4.6x2.6x0.13	2.36	—	—	—		30	—	0.75	100	10	—	—	65	50,000	0.6	UL/CSA	190297CP	3.79	3.45	3.15
	Phihong	PSA50201	+5V@1-8A; +12V@0-0.5A	46.0W	100-240@50-60	5.0x3.0x1.2	4.6x2.6x0.16	2.56	50	2.0	1.0	←→	20	1,500	1.0	—	16	10-55Hz; 2G	1	70	—	0.6	UL/CUL/TUV	190300CP	3.95	3.59	3.25
	IPD Power	SRW-45-2003	+5V@9A; +24V@1.5A	45.0W	85-264@47-63	5.0x3.0x1.2	4.6x2.6x0.16	2.50	—	0.5	—		40	4,250	—	—	16	—	10	68	150,000	0.5	UL/CSA/TUV/CE	204513CP	19.95	17.99	16.19
	IPD Power	SRW-45-3102	+5V@2.5A; +14.5V@2A; -5.2V@3A	45.0W	85-264@47-63	5.0x3.0x1.2	4.6x2.6x0.16	2.50	—	0.5	—		40	4,250	—	—	16	—	10	68	150,000	0.5	—	204548CP	19.95	14.99	10.49
	IPD Power	SRW-45-3002	+5V@5A; +15V@2A; -15V@0.7A	45.0W	85-264@47-63	5.0x3.0x1.2	4.6x2.6x0.16	2.50	—	0.5	—		40	4,250	—	—	16	—	10	68	150,000	0.5	UL/CSA/TUV	204521CP	19.95	17.99	16.19
	IPD Power	SRW-45-4008	+3.3V@5A; +3.3V@3A; +5V@3A; +12V@0.7A	45.0W	85-264@47-63	5.0x3.0x1.2	4.6x2.6x0.16	2.50	—	0.5	—		40	4,250	—	—	16	—	10	68	150,000	0.5	UL/CUL/TUV/CE	204530CP	19.95	17.99	16.19
	IPD Power	SRW-45-4002	+5V@5A; +15V@0.7A; -5V@2A; -15V@0.7A	45.0W	85-264@47-63	5.0x3.0x1.2	4.6x2.6x0.16	2.50	—	0.5	—		40	4,250	—	—	16	—	10	68	150,000	0.5	UL/CSA/TUV/CE	204492CP	19.95	14.99	10.49
	IPD Power	SRW-45-4004-27	+5V@5A; +15V@0.7A; +27V@1A; -15V@0.7A	45.0W	85-264@47-63	5.0x3.0x1.1	4.6x2.6x0.16	2.73	—	0.5	—		40	4,250	—	—	16	—	10	68	150,000	0.5	UL/CUL/TUV/CE	204476CP	19.95	17.99	16.19
Enclosed	Fortron	SU65P10C	+5V@0-10A	50.0W	85-264@47-63	6.1x4.2x2.2	4.8x3.2x0.17	0..87	50	—	0.5		15	3,000	0.85	—	10	—	—	70	400,000	1.5	UL/CSA/TUV/CE	211115CP	8.95	7.95	7.29
	Volgen	MRE-124R2U	+12V@4.2A	50.0W	115/240@50-60	7.1x3.9x1.6	6.7x3.6x0.08	1.13	—	—	—		—	—	—	—	—	—	—	—	—	0.7	UL/CSA/TUV/CE	205874CP	21.95	19.79	17.79
	Volgen	EXU-481R1	+48V@1.1A	52.8W	120@50-60	4.7x3.6x1.5	—	2.08	—	0.8	0.4		30	2,000	0.5	200	—	10-55Hz; 20G	10	78	—	0.8	UL	208936CP	21.95	19.79	17.79
	Autec	UPS50-2002	+5V@0.2-3A; +12V@0.1-3A	51.0W	90-264@47-440	5.0x3.0x1.9	4.6x2.6x0.16	1.79	50	3.0	0.5		20	3,750	—	—	20	—	—	70	—	0.7	UL/CSA/TUV	169050CP	9.95	7.95	5.95
	Volgen	PRK50U-1515W	+15V@1.5A; +15V@1.5A	50.0W	100/120@50-60	7.6x3.7x1.5	6.0x3.0x0.08	1.19	200	1.0	0.4	←→	—	1,500	0.5	100	20	10-55Hz; 20G	5	75	—	0.6	UL/CSA	205831CP	21.95	19.79	17.79
	Skynet	SNP-9F43-2	+5V@0-3A; +12V@0-3.5A	57.0W	115/230@50-60	5.0x3.0x1.3	4.6x2.6x0.16	2.92	50	1.0	1.0		30	—	—	—	20	—	—	70	—	0.5	UL/CSA/TUV	206463CP	12.95	10.39	7.79
	Volgen	ESK50U-0524W	+5V@3A; +24V@1.5A	51.0W	115/220@50-60	7.1x4.0x1.2	—	1.50	—	—	—		—	—	—	—	—	—	—	—	—	0.8	UL	205680CP	21.95	19.79	17.79
	Volgen	ERK50-0524W	+5V@6A; +24V@1.5A	50.0W	120/240@50-60	7.9x4.1x1.6	—	0.96	—	—	—		—	—	—	—	—	—	—	—	—	1.4	—	205997CP	21.95	19.79	17.79

* Primary Output

POWER

65-Watt Open Frame

NLP65-76 Series: Single & Triple Outputs

ARTESYN TECHNOLOGIES

- 100% full-load burn-in
- Universal AC input
- 3.3 watts/in³
- Two-year warranty
- 75 watts with 20 CFM of air
- 1U Package: 5" x 3" x 1.3"
- Mating connectors: P/Ns 104432CP & 104731CP, pg 125
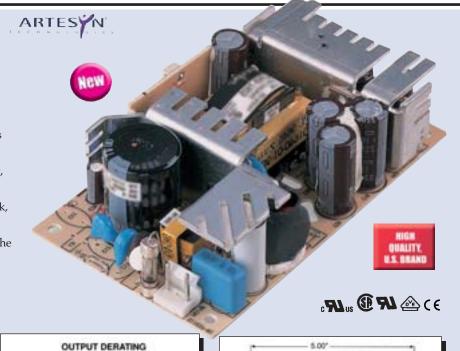- 0˚ to +70˚C working temperature (see output derating)

Detailed in blue below, the Artesyn NLP65 series is on a 5" x 3" card with maximum component height of 1.26" – one of the smallest in the industry and perfect for 1U applications. With just 20 CFM of air, the power can be boosted 15% to 75 watts from the free-air power of 65 watts. The NLP65 series, with full international safety approvals, and the CE mark, meets conducted and radiated emissions EN55022; and complies to EN61000-4-2/3/4/5/6 immunity standards. If Power Factor Correction is required, the Artesyn NLP65-96 series is also available in the same package (see pages 14-15).
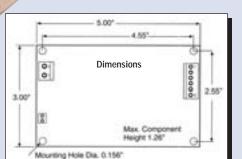
The NLP65 is designed for use in low power data networking, computer and telecom applications such as hubs, routers POS terminals, internet servers, cable modems and PBXs; as well as many industrial applications.

HIGH QUALITY, U.S. BRAND

UNDERSTANDING POWER SUPPLIES #3 & 4

SOFT-START: A feature which limits the start-up switching currents of a switching supply and causes the output voltage to rise gradually to its final value.

MTBF: Mean Time Between Failure. This failure rate of a power supply, expressed in hours, established by the actual operation or calculation from a known standard such as MIL-HDBK-217.
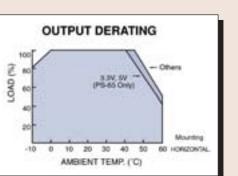
OUTPUT DERATING

Dimensions
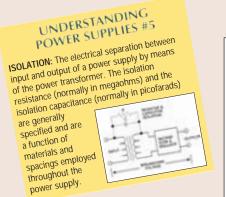
65-Watt Open Frame

PS-65, PD-65 & PT-65 Series: Single, Dual & Triple Outputs
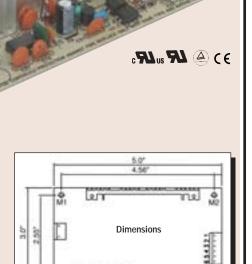
MW MEAN WELL

- 100% full-load burn-in
- Universal AC input
- 2.7 watts/in³
- Two-year warranty
- 105˚C output capacitor
- Mating connectors: P/Ns 104432CP & 104731CP, pg 125
- -10˚C to +60˚C working temperature (see output derating)

VALUE PRICED, HIGH QUALITY

Highlighted in tan below, the PS-65 and PT-65 series open-frame switchers from Mean Well are packaged in a high-density board with industry-standard mounting dimensions and only 1.7" component height. Their impressive reliability derives from a conservative design, the exclusive use of high-quality components, and 100% full-load burn-in. Full rated power is available with free-air convection cooling. They are approved by UL and TUV, and carry the CE mark, for use worldwide. Assured to operate correctly anywhere in the world, these switchers feature universal voltage input ranges of 85-264VAC and 120-370VDC.

UNDERSTANDING POWER SUPPLIES #5

ISOLATION: The electrical separation between input and output of a power supply by means of the power transformer. The isolation resistance (normally in megaohms) and the isolation capacitance (normally in picofarads) are generally specified and are a function of materials and spacings employed throughout the power supply.

OUTPUT DERATING

Dimensions

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Artesyn	NLP65-7605	+5V@0-13A	65.0W	85-264@47-63	—	see diagram	see diagram	3.33	50	2.0	2.0		17	3,000	0.7	1000	16	5-500Hz; 2.4G	—	72	150,000	0.6	UL/CUL/CSA/VDE/CE	218561CP	$64.59	$57.95	$54.59
Artesyn	NLP65-7612	+12V@0-5.4A	64.8W	85-264@47-63	—	see diagram	see diagram	3.32	120	2.0	2.0		17	3,000	0.7	1000	16	5-500Hz; 2.4G	—	72	150,000	0.6	UL/CUL/CSA/VDE/CE	218579CP	64.59	57.95	54.59
Artesyn	NLP65-7608	+5V@0-7.5A; +12V@0-2.5A; -12V@0-0.65A	75.3W	85-264@47-63	—	see diagram	see diagram	3.86	50	2.0	2.0		17	3,000	0.7	1000	16	5-500Hz; 2.4G	—	72	150,000	0.6	UL/CUL/CSA/VDE/CE	218587CP	64.59	57.95	54.59
Mean Well	PS-65-5	+5V@0-12A	60.0W	90-264@47-440	—	see diagram	see diagram	2.50	100	3.0	1.0	↔	20	3,000	0.5	20	20	10-500Hz; 2G	10	76	300,000	0.6	UL/CUL/TUV/CE	201937CP	30.95	27.89	21.95
Mean Well	PS-65-12	+12V@0-5.2A	62.4W	90-264@47-440	—	see diagram	see diagram	2.60	100	2.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	79	300,000	0.6	UL/CUL/TUV/CE	148638CP	30.95	27.89	21.95
Mean Well	PS-65-15	+15V@0-4.2A	63.0W	90-264@47-440	—	see diagram	see diagram	2.63	100	2.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	79	300,000	0.6	UL/CUL/TUV/CE	216750CP	30.95	22.89	21.95
Mean Well	PS-65-24	+24V@0-2.7A	64.8W	90-264@47-440	—	see diagram	see diagram	2.70	100	2.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	80	300,000	0.6	UL/CUL/TUV/CE	148646CP	30.95	27.89	21.95
Mean Well	PS-65-27	+27V@0-2.4A	64.8W	90-264@47-440	—	see diagram	see diagram	2.70	100	2.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	80	300,000	0.6	UL/CUL/TUV/CE	201945CP	30.95	27.89	21.95
Mean Well	PS-65-48	+48V@0-1.35A	64.8W	90-264@47-440	—	see diagram	see diagram	2.70	100	2.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	80	300,000	0.6	UL/CUL/TUV/CE	201953CP	30.95	27.89	21.95
Mean Well	PD65A	+5V@0.4-7A; +12V@0.2-3.2A	61.1W	90-264@47-440	—	see diagram	see diagram	2.72	50	3.0	1.0	↔	20	3,000	0.5	20	20	10-500Hz; 2G	10	78	288,000	0.6	UL/CUL/TUV/CE	194888CP	34.95	31.49	23.49
Mean Well	PD65B	+5V@0.4-3.5A; +24V@0.2-2A	65.5W	90-264@47-440	—	see diagram	see diagram	2.91	50	4.0	2.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	81	288,000	0.6	UL/CUL/TUV/CE	194896CP	34.95	31.49	23.49
Mean Well	PT-65B	+5V@0.4-5.5A; +12V@0.2-2.5A; -12V@0-0.5A	63.5W	90-264@47-440	—	see diagram	see diagram	2.49	50	4.0	2.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	77	277,000	0.6	UL/CUL/TUV/CE	216733CP	31.95	28.79	25.95
Mean Well	PT-65C	+5V@0.4-5.5A; +15V@0.2-2A; -15V@0-0.5A	65.0W	90-264@47-440	—	see diagram	see diagram	2.55	50	3.0	1.0		20	3,000	0.5	20	20	10-500Hz; 2G	10	77	277,000	0.6	UL/CUL/TUV/CE	216725CP	31.95	28.79	25.95
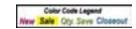
Other Versions Available: Call 800-831-4242

* Primary Output

Open Frame

Limited Supply – Special Offers – 90-Day Warranty

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Autec	UPS65-1051	+5V@0.2-13A	65.0W	115/230@50-60	—	6.0x3.5x1.5	4.8x3.2x0.16	2.06	50	1.0	0.5		20	3,750	—	—	20	—	—	70	—	0.8	UL/CSA/VDE	169068CP	$11.95	$9.59	$7.19
IPD Power	SRW-65-2006	+5V@9A; +12V@2A	65.0W	85-264@47-63	—	6.0x4.0x1.1	5.7x3.5x0.15	2.46	50	1.0	—		40	4,250	—	—	16	—	10	72	150,000	0.9	UL/CUL/TUV/CE	204468CP	21.95	19.79	17.79
Encad	U006612010	+5.2V@3A ; +24V@2A	65.0W	90-250@50-60	—	6.3x3.9x1.5	—	1.76	—	—	—		—	—	—	—	—	—	—	—	—	0.6	UL/CUL/TUV	196824CP	15.95	14.39	12.95
Digital Power	US70-421-60	+5V@7A; +12V@4A; -12V@1A	70.0W	90-250@47-63	—	5.0x3.2x1.5	—	2.50	50	3.0	0.2	↔	25	—	—	—	6	—	—	75	250,000	0.8	UL/CSA/TUV/CE	208725CP	21.95	19.79	17.79
IPD Power	SRW-65-4003	+5V@5A; +12V@2A; +24V@1A; -12V@2A	65.0W	85-264@47-63	—	6.0x4.0x1.1	5.7x3.5x0.16	2.46	—	1.0	—		40	4,250	—	—	16	—	10	72	150,000	0.9	UL/CSA/TUV	204484CP	21.95	19.79	17.79
Mean Well	PT-65D	+5V@0.5-4A; +12V@0.2-2A; +24V@0.2-1A	65.0W	90-264@47-440	—	5.0x3.0x1.5	4.6x2.6x0.15	2.89	50	2.0	1.0		20	3,000	0.5	30	20	10-500Hz; 2G	10	79	277,000	0.6	UL/CUL/TUV/CE	215706CP	29.95	26.95	24.29

* Primary Output

Open Frame

65-Watt Open Frame with Power Factor Correction

NLP65-96 Series: Single & Triple Outputs

- 100% full-load burn-in
- No minimum load required
- 75 watts with 20 CFM of air
- 1U Package: 5" x 3" x 1.3"
- Mating connectors: P/Ns 104432CP & 104731CP, pg 125
- 0˚ to +70˚C working temperature (see output derating)
- Universal AC input
- 3.3 watts/in³
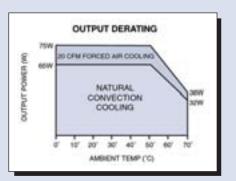- Two-year warranty
- Power Factor Correction

Detailed in blue below, the Artesyn NLP65 series are on a 5" x 3" card with maximum component height of 1.26" – one of the smallest in the industry and perfect for 1U applications. With just 20 CFM of air, the power can be boosted 15% to 75 watts from the free-air power of 65 watts. The NLP65 series, with full international safety approvals, and the CE mark, meets conducted and radiated emissions EN55022; and complies to EN61000-4-2/3/4/5/6 immunity standards. The Artesyn NLP65-96 models provide input harmonic current correction (Power Factor Correction) to satisfy EN61000-3-2. If Power Factor Correction is not required, the Artesyn NLP65-76 series is also available in the same package (see pages 12-13).
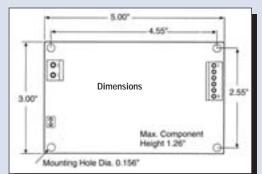
The NLP65 is designed for use in low power data networking, computer and telecom applications such as hubs, routers POS terminals, internet servers, cable modems and PBXs; as well as many industrial applications.

UNDERSTANDING POWER SUPPLIES #6

P.F.C. POWER FACTOR CORRECTION: Standard AC/DC converters draw line current in pulses around the peaks in line voltage. This may be undesirable for several reasons. PFC circuits ensure that the line current is drawn sinusoidally and in phase with the sinusoidal line voltage.
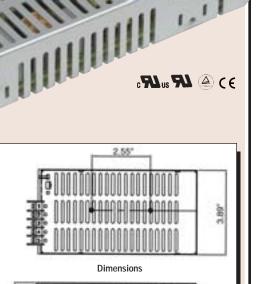
75-Watt Enclosed with Power Factor Correction

SP-75 Series: Single Output

- 100% full-load burn-in
- No minimum load required
- 105˚C output capacitor
- Power Factor Correction
- Mating connectors: P/N 103587CP, pg 119
- -10˚C to +60˚C working temperature (see output derating)
- Universal AC input
- 2.1 watts/in³
- Three-year warranty

Highlighted in tan below, the Mean Well SP-75 series features input Power Factor Correction that meets EN61000-3-2, required in Europe for power supplies 75 watts and above. They are approved by UL and TUV, and carry the CE mark for use worldwide. The high-density enclosed packaging results in a profile of only 1.3" and a power density of 2.1 watts per inch³. As with all Mean Well power products, every SP-75 product is subjected to 100% full-load burn-in testing. This rigorous production procedure detects infant product failures, contributing to Mean Well's world-class reliability. Protection includes short-circuit, overload and over-voltage.

UNDERSTANDING POWER SUPPLIES #7

THERMAL PROTECTION: An internal safeguard circuit in a power supply which shuts down the unit in the event of excess internal temperature.

SHORT-CIRCUIT PROTECTION: A feature which limits the output current of a power supply under short-circuit conditions so that the supply will not be damaged.

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Artesyn	NLP65-9612	+12V@0-5.4A	64.8W	85-264@47-63	✓	see diagram	see diagram	3.32	120	2.0	2.0		17	3,000	0.7	1000	16	5-500Hz, 2.4G	—	72	150,000	0.6	UL/CUL/CSA/VDE/CE	218595CP	$79.19	$67.69	$63.69
Artesyn	NLP65-9624	+24V@0-2.7A	64.8W	85-264@47-63	✓	see diagram	see diagram	3.32	240	2.0	2.0		17	3,000	0.7	1000	16	5-500Hz, 2.4G	—	72	150,000	0.6	UL/CUL/CSA/VDE/CE	218608CP	79.19	67.69	63.69
Artesyn	NLP65-9608	+5V@0-7.5A; +12V@0-2.5A; -12V@0-0.65A	75.3W	85-264@47-63	✓	see diagram	see diagram	3.86	50	2.0	2.0	↔	17	3,000	0.7	1000	16	5-500Hz, 2.4G	—	72	150,000	0.6	UL/CUL/CSA/VDE/CE	218616CP	79.19	67.69	63.69
Mean Well	SP75-5	+5V@0-15A	75.0W	85-264@47-63	✓	see diagram	see diagram	2.11	80	1.0	0.5		40	3,000	2.0	60	20	10-500Hz; 2G	10	72	208,800	1.2	UL/CUL/TUV/CE	194829CP	70.95	63.89	50.89
Mean Well	SP75-12	+12V@0-6.3A	75.6W	85-264@47-63	✓	see diagram	see diagram	2.13	80	0.5	0.5		40	3,000	2.0	60	20	10-500Hz; 2G	10	77	208,800	1.2	UL/CUL/TUV/CE	194837CP	70.95	63.89	50.89
Mean Well	SP75-15	+15V@0-5A	75.0W	85-264@47-63	✓	see diagram	see diagram	2.11	80	0.5	0.5	↔	40	3,000	2.0	60	20	10-500Hz; 2G	10	79	208,800	1.2	UL/CUL/TUV/CE	194845CP	70.95	63.89	50.89
Mean Well	SP75-24	+24V@0-3.2A	76.8W	85-264@47-63	✓	see diagram	see diagram	2.16	100	0.5	0.5		40	3,000	2.0	60	20	10-500Hz; 2G	10	80	208,800	1.2	UL/CUL/TUV/CE	194853CP	70.95	63.89	50.89
Mean Well	SP75-48	+48V@0-1.6A	76.8W	85-264@47-63	✓	see diagram	see diagram	2.16	100	0.5	0.5		40	3,000	2.0	60	20	10-500Hz; 2G	10	80	208,800	1.2	UL/CUL/TUV/CE	216805CP	70.95	63.89	50.89

Other Versions Available: Call 800-831-4242

* Primary Output

Limited Supply – Special Offers – 90-Day Warranty

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Artesyn	NLP70-9693	+3.3@10.5A; +5V@10.5A; +12V@0.65A	70.0W	100-240@50-60	✓	5.5x3.0x1.3	4.6x2.6x0.16	3.26	—	2.0	2.0		17	3,000	0.7	—	16	5-500Hz; 2.4G	—	70	150,000	0.8	UL/CSA/VDE/CE	182916CP	$3.95	$3.55	$3.25
Delta	DPS-60MPB	+3.3V@0.8-8A; +5V@1-9A; +12V@0-1A; -12V@0-0.2A	65.0W	90-270@47-63	—	5.8x3.3x1.4	—	2.24	50	2.0	2.0	↔	40	—	2.0	100	16	—	—	65	—	1.0	UL/CUL/TUV	171731CP	7.95	6.39	4.79
Autec	UPS61-1004-T	+3.3V@4A; +5V@2A; +12V@3A; +32V@0.5A	65.0W	115/230@50-60	—	5.0x3.5x1.8	—	1.90	—	—	—		—	—	—	—	—	—	—	—	—	0.8	CSA/CE	189966CP	5.89	5.29	4.75
Volgen	ESK70U-0524WA	+5V@2.5A; +24V@2.5A	72.5W	115/220@50-60	—	8.7x3.9x1.5	—	1.42	—	—	—		—	—	—	—	—	—	—	—	—	1.3		205989CP	24.95	22.49	20.25
Volgen	ESK80U-1515	+5V@10A; +15V@0.8A; -15V@0.8A	74.0W	115/220@50-60	—	8.7x5.0x1.5	—	1.13	—	—	—		—	—	—	—	—	—	—	—	—	1.9	UL/CSA	205698CP	24.95	22.49	20.25
Volgen	PRK70U-1515	+5V@5A; +15V@2A; -15V@1A	70.0W	100/120@50-60	—	8.7x4.1x2.8	6.9x3.4x0.08	0.70	80	0.8	0.4	↔	35	1,500	0.5	100	20	10-55Hz; 20G	5	73	—	1.0	UL/CSA	205840CP	24.95	22.49	20.25
Volgen	JRK-115B	+5V@4.5A; +15V@3.5A; +24V@0.4A; -5V@1.6A; -15V@1.5A	75.0W	100/240@50-60	—	10.5x5.0x2.5	—	0.36	—	—	—		—	—	—	—	—	—	—	—	—	2.4	—	205858CP	24.95	22.49	20.25

* Primary Output

Color Code Legend
New Sale Qty. Save Closeout

POWER

100-Watt Open Frame
LPS-100 Series: Single Output

- 100% full-load burn-in
- No minimum load required
- 105˚C output capacitor
- Mating connectors:
  P/Ns 215950CP & 215976CP, pg 125
- -10˚C to +60˚C working temp
  (see output derating)

- Auto-switch AC input
- 3.4 watts/in³
- Three-year warranty

VALUE PRICED, HIGH QUALITY
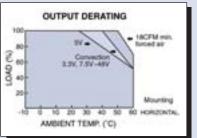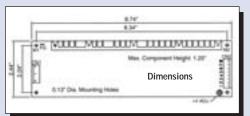
Detailed below in blue is one of Mean Well's premium series that carries an unusually long 3-year warranty. The LPS-100 benefits from a modern state-of-the-art design using highly integrated components. Assured to operate correctly anywhere in the world, these open-frame switchers feature universal voltage input ranges of 85-264VAC and 120-370VDC. The highly compact layout results in an impressive power density of 3.4 watts per inch³ and a maximum height of 1.3". These products are approved by UL, CUL and TUV; and carry the CE mark for use worldwide. EMC standards met are EN55022 (CISPR22) Class B and IEC1000-2/3/4.
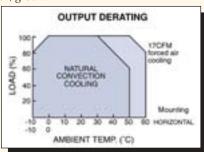
100-Watt Open Frame
PQ-100 Series: Quad Outputs
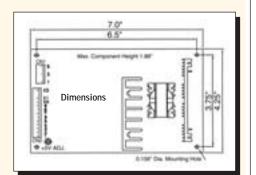
- 100% full-load burn-in
- 1.8 watts/in³
- 105˚C output capacitor
- Mating connectors:
  P/Ns 104723CP, 104766CP & 104432CP pg 125
- -10˚C to +60˚C working temp (see output derating)

- Universal AC input
- Two-year warranty

Shown below in buff color, this impressive series of quad-output 100-watt switchers features universal input voltage ranges of 90-264VAC and 127-370VDC. The solid, reliable, low cost design features overload protection to 140% of rated load with auto-recovery, and over-voltage protection to 135% of rated output voltage. Additional protection includes short-circuit and a soft-start circuit that limits the AC surge current to a safe value. With free-air convection the 100-watt rated power is available from -10˚C to 50˚C ambient temperature, and 60˚C with fan cooling. Withstand voltage is 3kVAC for input/output & 1.5kVAC input/ground.

VALUE PRICED, HIGH QUALITY

New

100-Watt Enclosed
S-100F Series: Single Output
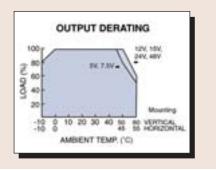
- 100% full-load burn-in
- No minimum load required
- 105˚C output capacitor
- Mating connectors: 103587CP, pg 119
- -10˚C to +60˚C working temp.
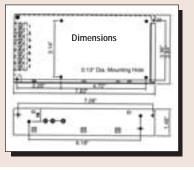 (see output derating)

- 1.7 watts/in³
- Two-year warranty

VALUE PRICED, HIGH QUALITY

Highlighted below in tan and surprisingly inexpensive for its capabilities, the S-100F series is one of Mean Well's most successful enclosed power supplies. With only free-air convection, the 100-watt rated power is available from 0˚C to 50˚C ambient temperature. These switchers derive their impressive reliability from a conservative design, the exclusive use of high-quality components, and 100% full-load burn-in. Protection includes short-circuit, overload and over-voltage. A novel soft-start circuit limits the AC surge current to a safe value. Guaranteed safety standards comprise UL1012, UL1950 and TUV EN60950; and these products have earned the European CE mark.

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Mean Well	LPS100-5	+5V@0-20A	100.0W	88-264@47-63	—	see diagram	see diagram	4.35	100	1.5	0.5		30	3,000	1.0	50	20	10-500Hz: 2G	10	77	203,000	0.8	UL/CUL/TUV/CE	213591CP	$49.95	$44.95	$38.49
Mean Well	LPS100-12	+12V@0-8.4A	100.8W	88-264@47-63	—	see diagram	see diagram	4.39	100	1.5	0.5		30	3,000	1.0	50	20	10-500Hz: 2G	10	79	203,000	0.8	UL/CUL/TUV/CE	173471CP	49.95	44.95	38.49
Mean Well	LPS100-15	+15V@0-6.7A	100.5W	88-264@47-63	—	see diagram	see diagram	4.38	100	1.5	0.5		30	3,000	1.0	50	20	10-500Hz: 2G	10	80	203,000	0.8	UL/CUL/TUV/CE	216717CP	49.95	44.95	38.49
Mean Well	LPS100-24	+24V@0-4.2A	100.8W	88-264@47-63	—	see diagram	see diagram	4.39	150	0.5	0.5	←→	30	3,000	1.0	50	20	10-500Hz: 2G	10	80	203,000	0.8	UL/CUL/TUV/CE	173462CP	49.95	44.95	38.49
Mean Well	LPS100-48	+48V@0-2.1A	100.8W	88-264@47-63	—	see diagram	see diagram	4.39	200	0.5	0.5		30	3,000	1.0	50	20	10-500Hz: 2G	10	81	203,000	0.8	UL/CUL/TUV/CE	216709CP	49.95	44.95	38.49
Mean Well	PQ-100B	+5V@2-10A; +12V@0.5-3.5A; -5V@0-0.5A; -12V@0-0.5A	100.5W	100-264@47-63	—	see diagram	see diagram	1.89	80	2.0	1.0		50	3,000	1.0	50	20	10-500Hz: 2G	10	72	258,000	1.1	UL/CUL/TUV/CE	217306CP	64.95	58.49	46.49
Mean Well	PQ-100D	+5V@2-5A; +12V@0.5-2A; +24V@0.4-2A; -12V@0-0.5A	103.0W	100-264@47-63	—	see diagram	see diagram	1.80	80	1.0	1.0		50	3,000	1.0	50	20	10-500Hz: 2G	10	77	258,000	1.1	UL/CUL/TUV/CE	217293CP	64.95	58.49	46.49
Mean Well	S-100F-5	+5V@0-20A	100.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.19	100	1.0	0.5		30	3,000	1.0	30	15	10-500Hz: 2G	10	76	314,000	1.4	UL/TUV/CE	201961CP	64.95	58.95	38.49
Mean Well	S-100F-12	+12V@0-8.5A	102.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.24	125	0.5	0.5	←→	30	3,000	1.0	30	15	10-500Hz: 2G	10	80	314,000	1.4	UL/TUV/CE	123385CP	64.95	58.95	38.49
Mean Well	S-100F-15	+15V@0-6.7A	100.5W	88-132/176-264@47-63	—	see diagram	see diagram	2.20	125	0.5	0.5		30	3,000	1.0	30	15	10-500Hz: 2G	10	81	314,000	1.4	UL/TUV/CE	212450CP	64.95	58.95	38.49
Mean Well	S-100F-24	+24V@0-4.5A	108.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.37	150	0.5	0.5		30	3,000	1.0	30	15	10-500Hz: 2G	10	83	314,000	1.4	UL/TUV/CE	201970CP	64.95	58.95	38.49
Mean Well	S-100F-48	+48V@0-2.2A	105.6W	88-132/176-264@47-63	—	see diagram	see diagram	2.31	150	0.5	0.5		30	3,000	1.0	30	15	10-500Hz: 2G	10	84	314,000	1.4	UL/TUV/CE	216792CP	64.95	58.95	38.49

Other Versions Available: Call 800-831-4242

Open Frame / **Enclosed**

* Primary Output

SALE — Limited Supply – Special Offers – 90-Day Warranty

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Astec	LPS112	+5V@0-16A	80.0W	100-250@50-60	—	7.0x4.0x1.7	6.5x3.5x0.16	1.68	50	—	—		18	—	0.5	—	20	5-500Hz: 0.75G	5	70	550,000	1.2	UL/CUL/CSA/VDE/CE	190676CP	$7.89	$6.99	$6.39
Digital Power	USS100-245	+5V@20A	100.0W	90-250@50-60	—	5.0x3.2x1.5	2.7x2.7x0.08	4.17	100	3.0	0.2	←→	25	—	—	—	6	5-500Hz: 0.75G	—	75	160,000	0.8	UL/CUL/CSA/TUV/CE	208750CP	29.95	26.99	24.29
EOS	VLT100-1004	48V@0.2-2.1A	100.0W	100-240@50-60	✓	5.0x3.0x1.0	4.6x2.6x0.16	6.67	480	3.0	0.3		35	—	—	50	10	—	—	85	200,000	0.5	UL/CUL/VDE/CE	203326CP	27.95	24.95	22.49
Lambda	PW-G-00790	+3.3V@15A; +5V@7A	85.0W	100-240@50-60	—	8.0x3.5x1.3	—	2.34	—	—	—		—	—	—	—	—	—	—	—	—	1.2	UL/CSA/TUV/CE	196251CP	3.39	3.09	2.85
Digital Power	US100-313	+3.3V@6A; +5V@12A; +12V@0.8A	90.0W	90-250@47-63	—	6.0x4.0x1.0	2.7x2.7x0.12	3.75	100	3.0	0.2		25	—	—	—	6	5-500Hz: 0.75G	—	75	160,000	1.0	UL/CUL/CSA/TUV/CE	157913CP	24.95	22.49	20.25
Power-One	MAP80-4003	+5V@14A; +5V@3.5A; -5V@1A; -15V@1A	80.0W	100/230@47-63	—	7.2x4.3x1.8	6.7x3.2x0.17	1.44	50	1.0	0.2	←→	45	2,600	0.5	20	20	10-2kHz; 6G	—	75	175,000	2.0	UL/CSA/TUV/CE	202876CP	24.95	22.49	20.29
Volgen	MRE-156R6U	+15V@6.6A	100.0W	115/240@50-60	—	8.6x3.9x2.0	—	1.49	—	—	—		—	—	—	—	—	—	—	—	—	1.2	UL/CSA/TUV	205971CP	31.95	28.79	25.89

* Primary Output

JAMECO

Color Code Legend
New Sale Qty. Save Closeout

POWER

POWER

100-Watt Open Frame With Power Factor Correction

LPP-100 Series: Single Output

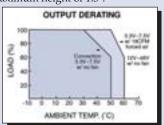- 100% full-load burn-in
- No minimum load required
- 105˚C output capacitor
- Power Factor Correction
- Mating connectors: P/Ns 215950CP & 215976CP, pg 125
- -10˚C to +60˚C working temp (see output derating)

- Auto-switch AC input
- 3.4 watts/in³
- Three-year warranty

Detailed below in blue, one of Mean Well's newest and most modern designs, the open-frame LPP100 series features input Power Factor Correction that meets EN61000-3-2, required in Europe for power supplies 75 watts and above. Couple this with their full range universal input ranges of 85-264VAC and 120-370VDC, and these switchers are ready for use worldwide. Meeting the requirements of UL1950 and TUV EN60950, these products are approved by UL, CUL, and TUV; and carry the CE mark, for use worldwide. EMC standards met are EN55022 Class B and EN61000-4-2/3/4/5/6/8/11. The highly compact layout results in an impressive power density of 3.4 watts per inch³ and maximum height of 1.3".

VALUE PRICED, HIGH QUALITY

New

100-Watt Open Frame with Power Factor Correction

PPQ-1003 & PPQ-100 Series: Quad Outputs

- 100% full-load burn-in
- 4.2 watts/in³
- 105˚C output capacitor
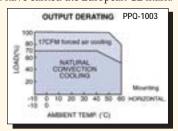- Mating connectors: PPQ1003-P/Ns 104766CP & two 104432CP, pg 125; PPQ100-P/Ns 104715CP & two 104723CP, pg 125;
- -10˚C to +60˚C working temp (see output derating)

- Auto-switch AC input
- Power Factor Corrected
- Three-year warranty

Shown below in buff color, for applications requiring 3.3VDC and a total of four outputs, these series offer excellent performance, high reliability and surprisingly low cost. These open-frame switchers include both input Power Factor Correction and universal input voltage ranges of 85-264VAC and 120-370VDC. Full 100-watt output power is available from -10˚C to 50˚C with 17CFM of forced air cooling, and 80 watts is available to 60˚C. Protection includes short-circuit, overload and over-voltage; and a novel soft-start circuit limits the AC surge current to a safe value. Guaranteed safety standards comprise UL1950 and TUV EN60950, and these products have earned the European CE mark.
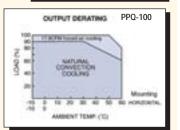
VALUE PRICED, HIGH QUALITY

Dimensions

100-Watt Enclosed With Power Factor Correction
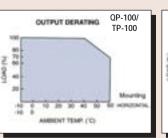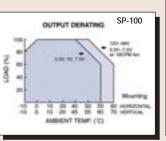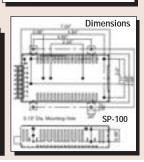
SP-100, TP-100 & QP-100 Series: Single, Triple & Quad Outputs

- 100% full-load burn-in
- 2.0 watts/in³
- 105˚C output capacitor
- Mating connectors: 103587CP, pg 119
- -10˚C to +60˚C working temp. (see output derating)

- Universal AC input
- Power Factor Correction
- Three-year warranty

Highlighted below in tan, this Mean Well family of 100-watt enclosed switchers feature input Power Factor Correction of 0.98 at 115VAC that complies with EN1000-3-2, required in Europe for power supplies 75 watts and above. They are approved by UL and TUV, and carry the CE mark, for use worldwide. The high-density enclosed packaging results in a profile of only 1.8" and a power density of 2.0 watts per inch³. As with all Mean Well products, all SP-100, TP-100 and QP-100 products are subject to 100% full-load burn-in testing. This rigorous production procedure detects infant product failures, contributing to Mean Well's world-class reliability. Protection includes short-circuit, overload and over-voltage.

Dimensions　QP-100/TP-100

VALUE PRICED, HIGH QUALITY

Dimensions

OUTPUT DERATING
Dimensions

OUTPUT DERATING PPQ-1003

OUTPUT DERATING PPQ-100

OUTPUT DERATING QP-100/TP-100

OUTPUT DERATING SP-100

SP-100

Manufacturer	Manufacturer Product Number	Output		Input	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price		
		Voltage@Current (min-max)	Power	(VAC @ Hz)																					1	10	50
Mean Well	LPP-100-5	+5V@0-20A	100.0W	85-264@47-63	✔	see diagram	see diagram	3.42	100	1.0	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	75	224,300	0.8	UL/CUL/TUV/CE	216696CP	$60.95	$54.89	$44.79
Mean Well	LPP-100-12	+12V@0-8.5A	102.0W	85-264@47-63	✔	see diagram	see diagram	3.49	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	79	224,300	0.8	UL/CUL/TUV/CE	216688CP	60.95	54.89	44.79
Mean Well	LPP-100-15	+15V@0-6.7A	100.5W	85-264@47-63	✔	see diagram	see diagram	4.38	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	80	224,300	0.8	UL/CUL/TUV/CE	216670CP	60.95	54.89	44.79
Mean Well	LPP-100-24	+24V@0-4.2A	100.8W	85-264@47-63	✔	see diagram	see diagram	3.45	150	0.5	0.5	↔	40	3,000	2.0	30	20	10-500Hz: 2G	10	83	224,300	0.8	UL/CUL/TUV/CE	204610CP	60.95	54.89	44.79
Mean Well	LPP-100-48	+48V@0-2.1A	100.8W	85-264@47-63	✔	see diagram	see diagram	3.45	250	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	83	224,300	0.8	UL/CUL/TUV/CE	216653CP	60.95	54.89	44.79
Mean Well	PPQ-1003B	+3.3V@0-10A; +5V@2-10A; +12V@0.2-2A; -12V@0-0.3A	110.6W	90-264@47-63	✔	see diagram	see diagram	2.30	100	2.0	1.0		40	3,000	1.0	50	16	10-500Hz: 2G	10	72	150,600	1.1	UL/CUL/TUV/CE	213815CP	81.95	73.79	61.95
Mean Well	PPQ-1003D	+3.3V@0-10A; +5V@2-10A; +12V@0.2-2A; -12V@0-0.3A	114.2W	90-264@47-63	✔	see diagram	see diagram	2.37	100	2.0	1.0		40	3,000	1.0	50	16	10-500Hz: 2G	10	72	150,600	1.1	UL/CUL/TUV/CE	213807CP	81.95	73.79	61.95
Mean Well	PPQ-100B	+5V@2-10A; +12V@0.3-3.4A; -12V@0-0.6A; -5V@0-0.6A	101.0W	90-264@47-63	✔	see diagram	see diagram	2.10	100	2.0	1.0		40	3,000	3.5	50	16	10-500Hz: 2G	10	75	162,500	1.1	UL/CUL/TUV/CE	217277CP	81.95	73.79	61.95
Mean Well	PPQ-100D	+5V@2-8; +24V@0.3-2A; -12V@0-0.6A; -12V@0-0.6A	102.4W	90-264@47-63	✔	see diagram	see diagram	2.13	100	2.0	1.0		40	3,000	3.5	50	16	10-500Hz: 2G	10	78	162,500	1.1	UL/CUL/TUV/CE	217285CP	81.95	73.79	61.95
Mean Well	SP100-3.3	+3.3V@0-20A	66.0W	86-264@47-63	✔	see diagram	see diagram	1.48	100	1.0	0.5	↔	40	3,000	2.0	30	20	10-500Hz: 2G	10	70	211,000	1.3	UL/CUL/TUV/CE	212441CP	81.95	73.79	57.29
Mean Well	SP100-5	+5V@0-20A	100.0W	86-264@47-63	✔	see diagram	see diagram	2.24	100	1.0	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	76	211,000	1.3	UL/CUL/TUV/CE	194790CP	81.95	73.79	57.29
Mean Well	SP100-12	+12V@0-8.5A	102.0W	86-264@47-63	✔	see diagram	see diagram	2.29	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	80	211,000	1.3	UL/CUL/TUV/CE	194802CP	81.95	73.79	57.29
Mean Well	SP100-15	+15V@0-6.7A	100.5W	86-264@47-63	✔	see diagram	see diagram	2.25	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	82	211,000	1.3	UL/CUL/TUV/CE	212433CP	81.95	73.79	57.29
Mean Well	SP100-24	+24V@0-4.2A	100.8W	86-264@47-63	✔	see diagram	see diagram	2.26	150	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	84	211,000	1.3	UL/CUL/TUV/CE	194811CP	81.95	73.79	57.29
Mean Well	SP100-48	+48V@0-2.1A	100.8W	86-264@47-63	✔	see diagram	see diagram	2.26	250	0.5	0.1		40	3,000	2.0	30	20	10-500Hz: 2G	10	82	211,000	1.3	UL/CUL/TUV/CE	212425CP	81.95	73.79	57.29
Mean Well	TP-100A	+5V@3-10A; +12V@0.4-4A; -5V@0-0.6A	101.0W	90-264@47-63	✔	see diagram	see diagram	1.85	100	3.0	1.0		40	3,000	3.5	60	16	10-500Hz: 2G	10	75	170,100	1.6	UL/CUL/TUV/CE	213794CP	134.95	121.49	88.89
Mean Well	TP-100B	+5V@3-10A; +12V@0.4-4A; -12V@0-0.6A	105.2W	90-264@47-63	✔	see diagram	see diagram	1.93	100	3.0	1.0		40	3,000	3.5	60	16	10-500Hz: 2G	10	78	170,100	1.6	UL/CUL/TUV/CE	213786CP	134.95	121.49	88.89
Mean Well	TP-100C	+5V@3-10A; +15V@0.4-3A; -15V@0-0.6A	104.0W	90-264@47-63	✔	see diagram	see diagram	1.90	100	3.0	1.0		40	3,000	3.5	60	16	10-500Hz: 2G	10	77	170,100	1.6	UL/CUL/TUV/CE	213778CP	134.95	121.49	88.89
Mean Well	TP-100D	+5V@3-10A; +24V@0.3-2A; +12V@0-0.6A	105.2W	90-264@47-63	✔	see diagram	see diagram	1.93	100	3.0	1.0		40	3,000	3.5	60	16	10-500Hz: 2G	10	78	170,100	1.6	UL/CUL/TUV/CE	213760CP	134.95	121.49	88.89
Mean Well	QP-100-3B	+3.3V@0-8A; +5V@2-8A; +12V@0.3-2.2A; -12V@0-0.6A	100.0W	90-264@47-63	✔	see diagram	see diagram	1.64	100	2.0	1.0		40	3,000	3.5	50	16	10-500Hz: 2G	10	74	139,900	1.6	UL/CUL/TUV/CE	213639CP	149.95	134.95	98.49
Mean Well	QP-100-D	+5V@2-8A; +12V@0-2.4A; +24V@0.3-1A; -12V@0-0.6A	100.0W	90-264@47-63	✔	see diagram	see diagram	1.64	120	2.0	1.0	↔	40	3,000	3.5	50	16	10-500Hz: 2G	10	78	139,900	1.6	UL/CUL/TUV/CE	213621CP	149.95	134.95	98.49
Mean Well	QP-100F	+5V@2-8A; +15V@0-2A; +24V@0.3-1A; -15V@0-0.6A	103.0W	90-264@47-63	✔	see diagram	see diagram	1.69	120	2.0	1.0		40	3,000	3.5	50	16	10-500Hz: 2G	10	78	139,900	1.6	UL/CUL/TUV/CE	213612CP	149.95	134.95	98.49

Open Frame　　Open Frame　　Enclosed　　Enclosed

Other Versions Available: Call 800-831-4242

Other Versions Available: Call 800-831-4242

* Primary Output

Color Code Legend — New Sale Qty. Save Closeout

110-Watt Open Frame

ARTESYN TECHNOLOGIES

NFS110-76 & NFS110-79 Series: Single & Quad Outputs

- 100% full-load burn-in
- 110W with 20 CFM of air
- 1U Package: 7" x 4.25" x 1.8"
- Mating connectors: P/Ns 104723CP, 104766CP & 104432CP, pg 125
- Medical Safety approval (NFS110-79 only)
- 0˚C to +70˚C working temp. (see output derating)
- Universal AC input
- 2.1 watts/in³
- Two-year warranty

Detailed below in blue, the Artesyn NFS110 series are 110 watt universal-input power supplies on a 7" x 4.25" x 1.8" card. The NFS110-76 models have proven to be highly reliable and versatile for a wide range of communication and industrial applications, with a very high peak current capability on each output for drive and motor applications. The NFS110-76 series is popular in low power data networking, computer, telecom and industrial applications such as servers, thermal printers, storage devices, vending machines and POS equipment. The NFS110-96 feature safety leakage current of less than 100μA at 264VAC and isolation voltage of 4000VAC. These models have full medical safety approval to EN60601 and UL2601, and meet conducted emissions requirements of EN55022 level A. They are designed for use in low power medical, dental and laboratory applications.

HIGH QUALITY, U.S. BRAND

110-Watt Open Frame
With Power Factor Correction

NLP110 Series: Single & Triple Outputs

- 100% full-load burn-in
- 4.4 watts/in³
- 105˚C output capacitor
- 1U package: 6.5" x 3" x 1.3"
- 110W with 20 CFM of air
- Mating connectors: P/Ns 104432CP & 104731CP (2), pg 125
- 0˚C to +70˚C working temp. (see output derating)
- Universal AC input
- Power Factor Corrected
- Two-year warranty

Shown below in buff color, the Artesyn NLP110 series is Power Factor Corrected to meet EN61000-3-2. The multiple output models can deliver equal amounts of current on multiple low voltage outputs to support designs that still span the industry transition from 5-volt to 3.3-volt logic. The NLP110's high power density results in a package only 1.5" longer than the 65-watt Artesyn NLP-65. The NLP110 series, with full international safety approvals, and the CE mark, meets conducted and radiated emissions EN55022 and complies to EN61000-4-2/3/4/5/6 immunity standards. The NLP110 is primarily designed for networking applications in 1U shelves or boxes that have a heavy logic content such as access concentrators, midrange routers, LAN switchers and shared media hubs.
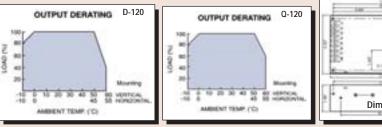
Other Versions Available: Call 800-831-4242

HIGH QUALITY, U.S. BRAND

OUTPUT DERATING

120-Watt Enclosed

MW MEAN WELL

D-120 & Q-120 Series: Dual & Quad Outputs

- 100% full-load burn-in
- 105˚C output capacitor
- Mating connectors: 103587CP, pg 119
- -10˚C to +60˚C working temp. (see output derating)
- 1.8 watts/in³
- Two-year warranty

Highlighted below in tan, the workhorse D-120 and Q-120 have long been amongst the most popular Mean Well series of enclosed switching power supplies. Their efficiency and low working temperature contribute to their very high MTBF of 272,000 hours. Full 120 watts of power is available over the ambient temperature range of 0˚C to 50˚C. With derating (see below) the range extends to -10˚C to 60˚C. The solid, reliable, low-cost design features overload protection to 135% of rated load with auto-recovery, and over-voltage protection to 135% of rated output voltage. Additional protection includes short-circuit and a soft-start circuit that limits the AC surge current to a safe value.

VALUE PRICED, HIGH QUALITY

OUTPUT DERATING D-120 | OUTPUT DERATING Q-120 | Dimensions

	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
	Artesyn	NFS110-7612	+12V@0-7A	84.0W	85-264@47-440	—	see diagram	see diagram	1.67	120	2.0	0.1		35	3,000	0.2	—	17	5-500Hz; 2.4G	3	72	125,000	1.2	UL/CUL/CSA/VDE/CE	218982CP	$126.95	$108.49	$102.15
Open Frame	Artesyn	NFS110-7624	+24V@0-3.5A	84.0W	85-264@47-440	—	see diagram	see diagram	1.67	240	2.0	0.1		35	3,000	0.2	—	17	5-500Hz; 2.4G	3	75	125,000	1.2	UL/CUL/CSA/VDE/CE	218974CP	126.95	108.49	102.15
	Artesyn	NFS110-7602P	+5.1V@0-8A; +12V@0-4.5A; -5V@0-0.5A; -12V@0-0.5A	103.3W	85-264@47-440	—	see diagram	see diagram	2.60	50	2.0	0.1		35	3,000	0.2	—	17	5-500Hz; 2.4G	3	70	125,000	1.3	UL/CUL/CSA/VDE/CE	218966CP	126.95	108.49	102.15
	Artesyn	NFS110-7604	+5.1V@0-8A; +15V@0-4A; -5V@0-0.5A; -15V@0-0.5A	110.6W	85-264@47-440	—	see diagram	see diagram	2.78	50	2.0	0.1		35	3,000	0.2	—	17	5-500Hz; 2.4G	3	70	125,000	1.3	UL/CUL/CSA/VDE/CE	220231CP	126.95	108.49	102.15
	Artesyn	NFS110-7901P (medical)	+5.1V@0-8; +12V@0-4.5A; -5V@0-0.5A; -12V@0-0.5A	103.3W	90-253@47-440	—	see diagram	see diagram	1.91	50	—	0.1		17	4,000	0.1	—	17	5-500Hz; 2.4G	3	70	125,000	1.3	UL/CSA/VDE/CE	220222CP	131.15	112.15	105.55
	Artesyn	NFS110-7902P (medical)	+5.1V@0-8A; +12V@0-4.5A; +24V@0-3.5A; -12V@0-0.5A	110.0W	90-253@47-440	—	see diagram	see diagram	3.41	50	—	0.1		17	4,000	0.1	—	17	5-500Hz; 2.4G	3	70	125,000	1.3	UL/CSA/VDE/CE	220214CP	131.15	112.15	105.55
	Artesyn	NLP110-9605	+5V@0.5-15A	75.0W	90-264@47-63	✓	see diagram	see diagram	2.96	50	2.0	2.0		18	3,000	0.45	1000	16.7	5-500Hz; 2.4G	3	75	220,000	0.6	UL/CUL/CSA/VDE	218915CP	107.65	96.65	90.95
	Artesyn	NLP110-9612	+12V@0.3-6.4A	76.8W	90-264@47-63	✓	see diagram	see diagram	3.03	120	2.0	2.0		18	3,000	0.45	1000	16.7	5-500Hz; 2.4G	3	75	220,000	0.6	UL/CUL/CSA/VDE	218923CP	107.65	96.65	90.95
	Artesyn	NLP110-9624	+24V@0.2-3.2A	76.8W	90-264@47-63	✓	see diagram	see diagram	3.03	240	2.0	2.0		18	3,000	0.45	1000	16.7	5-500Hz; 2.4G	3	75	220,000	0.6	UL/CUL/CSA/VDE	218931CP	107.65	96.65	90.95
	Artesyn	NLP110-9693	+3.3V@0.2-13A; +5V@0.5-13A; +12V@0-0.65A	110.0W	90-264@47-63	✓	see diagram	see diagram	4.56	50	2.0	2.0		18	3,000	0.45	1000	16.7	5-500Hz; 2.4G	3	75	220,000	0.6	UL/CUL/CSA/VDE	218940CP	107.65	96.65	90.95
	Artesyn	NLP110-9608	+5V@0.2-13A; +12V@0.2-6.5A; -12V@0-0.65A	110.0W	90-264@47-63	✓	see diagram	see diagram	5.95	120	2.0	2.0		18	3,000	0.45	1000	16.7	5-500Hz; 2.4G	3	75	220,000	0.6	UL/CUL/CSA/VDE	218958CP	107.65	96.65	90.95
Enclosed	Mean Well	D-120A	+5V@2-12A; +12V@0.5-5A	120.0W	88-132/176-264@47-63	—	see diagram	see diagram	1.79	60	0.5	0.5		35	3,000	<3.5	50	20	10-500Hz; 2G	10	78	272,000	1.9	UL/CUL/TUV/CE	132409CP	69.95	62.95	47.39
	Mean Well	D-120B	+5V@2-6A; +24V@0.4-4A	126.0W	88-132/176-264@47-63	—	see diagram	see diagram	1.88	60	0.5	0.5		35	3,000	<3.5	50	20	10-500Hz; 2G	10	80	272,000	1.9	UL/CUL/TUV/CE	132396CP	69.95	62.95	46.39
	Mean Well	Q-120B	+5V@2-11A; -5V@0.2-1A; 12V@0.5-4A; -12V@0.2-1A	120.0W	88-132/176-264@47-63	—	see diagram	see diagram	1.79	80	0.5	0.5		35	3,000	<3.5	50	20	10-500Hz; 2G	10	77	261,000	1.9	UL/CUL/TUV/CE	132388CP	74.95	67.95	54.39
	Mean Well	Q-120D	+5V@2-8A; +24V@0.2-2A; +12V@0.2-2A; -12V@0.2-1A	124.0W	88-132/176-264@47-63	—	see diagram	see diagram	1.85	80	0.5	0.5		35	3,000	<3.5	50	20	10-500Hz; 2G	10	80	261,000	1.9	UL/CUL/TUV/CE	132370CP	74.95	67.95	54.39

* Primary Output

Limited Supply – Special Offers – 90-Day Warranty

SALE

	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Open Frame	Astec	AA20140	+5V@1-20A; +12V@0.2-2A	120.0W	100-240@50-60	✓	7.0x4.2x1.5	6.5x3.8x0.17	2.72	50	—	—		40	—	2.0	—	15	32-2kHz; 1G	5	65	200,000	1.1	UL/CSA/VDE	190422CP	$6.39	$5.85	$5.29
	Astec	NTQ123	+3.3V@0-25A; +5V@2-24A; +12V@0-2A; -12V@0-1A	120.0W	85-264@47-63	✓	7.0x4.0x1.5	—	2.86	50	—	—		38	—	0.75	—	20	5-500Hz; 0.7G	5	65	1,000,000	1.6	UL/CSA/VDE/CE	196701CP	28.95	25.95	19.95
	Power-One	MAP110-4000P	+5V@12A; +12V@5A; -5V@1A; -12V@1A	110.0W	85-264@47-63	—	7.0x4.3x1.9	6.5x3.8x0.17	1.92	50	0.5	0.2		41	2,600	0.75	20	20	—	—	75	134,000	1.6	UL/CSA/TUV/CE	202868CP	29.95	26.99	24.29
	IPD Power	SRW-115-4001	+5V@12A; +12V@4A; -5V@4A; -12V@2A	115.0W	85-264@47-63	—	7.0x4.3x1.2	6.0x3.8x0.16	3.18	—	1.0	—		40	4,250	—	1000	16	—	10	72	150,000	1.3	UL/CUL/TUV/CE	204505CP	29.95	22.49	15.75
	IPD Power	SRW-115-4001-48	+5V@15A; +12V@1A; -5V@3A; -48V@1A	115.0W	85-264@47-63	—	7.0x4.3x1.2	6.0x3.8x0.16	3.18	—	1.0	—		40	4,250	—	1000	16	—	10	72	150,000	1.3	UL/CUL/TUV/CE	204450CP	29.95	26.99	24.29
Enclosed	Volgen	EXU-482R2	+48V@2.2A	105.0W	100/120@50-60	—	6.9x3.7x1.8	4.6x3.2x0.12	2.28	—	0.8	0.4		30	2,000	0.5	200	—	10-55Hz; 20G	10	86	—	0.6	UL	205786CP	31.95	28.79	25.89

* Primary Output

POWER

POWER
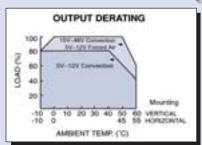
150-Watt Enclosed
S-150 Series: Single Output

- 100% full-load burn-in
- No minimum load required
- 105˚C output capacitor
- Mating connectors: P/N 103587CP, pg 119
- -10˚ to +60˚C working temperature (see output derating)
- Two-year warranty
- 2.2 watts/in³

VALUE PRICED, HIGH QUALITY

Highlighted in blue below, the highly popular S-150 series from Mean Well derives its impressive reliability from a conservative design, the exclusive use of high-quality components, and 100% full-load burn-in. Assured to operate correctly anywhere in the world, these switchers feature universal voltage input ranges of 85-264VAC and 120-370VDC. Protection includes short-circuit, overload and over-voltage; and a novel soft-start circuit limits the AC surge current. Manufacturer guaranteed safety standards comprise UL1950 and TUV EN60950, and these products have earned the European CE mark. The DC output voltage can be adjusted ±10% of nominal rating.
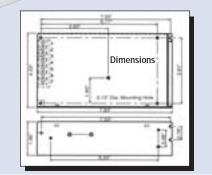
UNDERSTANDING POWER SUPPLIES #8

LOAD REGULATION: The percent change in output voltage as the load is changed from minimum to maximum, at constant temperature. The load change may be specified for other than no load to full load, such as 20% load to full load.

OUTPUT DERATING

Dimensions

150-Watt Enclosed with Power Factor Correction
SP-150, TP-150 & QP-150 Series: Single, Triple & Quad Outputs
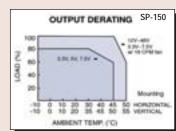
- 100% full-load burn-in
- Power Factor Correction
- 105˚C output capacitor
- Mating connectors: P/N 103587CP, pg 119
- -10˚C to +60˚C working temperature (see output derating)
- Universal AC input
- 2.5 watts/in³
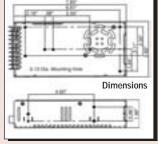- Three-year warranty
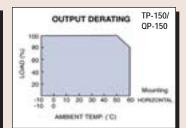
VALUE PRICED, HIGH QUALITY
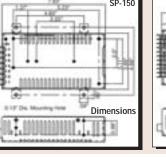
Detailed below in tan, these advanced switchers are part of Mean Well's family of premium power supplies that carry an unusually long three-year manufacturer's warranty. Their performance, reliability and low cost result from a modern state-of-the-art design using integrated components. The SP-150, TP-150 and QP-150 all offer input Power Factor Correction that meets EN61000-3-2. Assured to operate correctly anywhere in the world, these enclosed switchers feature universal voltage input ranges of 85-264VAC and 120-370VDC. These products are approved by UL, CUL and TUV, and carry the CE mark, for use worldwide. EMC standards met are EN55022 Class B and EN61000-4-2/3/4/5/6/8/11.

OUTPUT DERATING SP-150

OUTPUT DERATING TP-150/QP-150

SP-150

TP-150/QP-150

Dimensions

Other Versions Available: Call 800-831-4242

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Mean Well	S-150-5	5V@0-30A	150.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.24	150	0.5	0.5		35	3,000	3.5	50	20	10-500Hz; 2G	10	78	286,000	1.8	UL/CUL/TUV/CE	123393CP	$69.95	$62.95	$43.95
Mean Well	S-150-7.5	7.5V@0-20A	150.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.24	150	0.5	0.5		35	3,000	3.5	50	20	10-500Hz; 2G	10	80	286,000	1.8	UL/CUL/TUV/CE	123414CP	69.95	62.95	43.95
Mean Well	S-150-12	12V@0-12.5A	150.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.24	180	0.3	0.3		35	3,000	3.5	50	20	10-500Hz; 2G	10	82	286,000	1.8	UL/CUL/TUV/CE	123422CP	69.95	62.95	43.95
Mean Well	S-150-13.5	13.5V@0-11.2A	151.2W	88-132/176-264@47-63	—	see diagram	see diagram	2.25	180	0.3	0.3	↔	35	3,000	3.5	50	20	10-500Hz; 2G	10	83	286,000	1.8	UL/CUL/TUV/CE	202024CP	69.95	62.95	43.95
Mean Well	S-150-15	15V@0-10A	150.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.24	180	0.3	0.3		35	3,000	3.5	50	20	10-500Hz; 2G	10	84	286,000	1.8	UL/CUL/TUV/CE	123431CP	69.95	62.95	43.95
Mean Well	S-150-24	24V@0-6.5A	156.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.33	240	0.2	0.2		35	3,000	3.5	50	20	10-500Hz; 2G	10	85	286,000	1.8	UL/CUL/TUV/CE	123449CP	69.95	62.95	43.95
Mean Well	S-150-27	27V@0-5.6A	151.2W	88-132/176-264@47-63	—	see diagram	see diagram	2.25	240	0.2	0.2		35	3,000	3.5	50	20	10-500Hz; 2G	10	86	286,000	1.8	UL/CUL/TUV/CE	202032CP	69.95	62.95	43.95
Mean Well	S-150-48	48V@0-3.2A	153.6W	88-132/176-264@47-63	—	see diagram	see diagram	2.29	240	0.2	0.2		35	3,000	3.5	50	20	10-500Hz; 2G	10	87	286,000	1.8	UL/CUL/TUV/CE	167345CP	69.95	62.95	43.95
Mean Well	SP-150-3.3	3.3V@0-30A	99.0W	85-264@47-63	✔	see diagram	see diagram	1.63	100	1.0	0.5		40	3,000	2.0	30	20	10-500Hz; 2G	10	67	191,000	1.7	UL/CUL/TUV/CE	201902CP	91.95	82.79	65.95
Mean Well	SP-150-5	5V@0-30A	150.0W	85-264@47-63	✔	see diagram	see diagram	2.47	100	1.0	0.5		40	3,000	2.0	30	20	10-500Hz; 2G	10	75	191,000	1.7	UL/CUL/TUV/CE	201911CP	91.95	82.79	65.95
Mean Well	SP-150-12	12V@0-12.5A	150.0W	85-264@47-63	✔	see diagram	see diagram	2.47	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz; 2G	10	80	191,000	1.7	UL/CUL/TUV/CE	173420CP	91.95	82.79	65.95
Mean Well	SP-150-15	15V@0-10A	150.0W	85-264@47-63	✔	see diagram	see diagram	2.47	100	0.5	0.5	↔	40	3,000	2.0	30	20	10-500Hz; 2G	10	81	191,000	1.7	UL/CUL/TUV/CE	173411CP	91.95	82.79	65.95
Mean Well	SP-150-24	24V@0-6.3A	150.0W	85-264@47-63	✔	see diagram	see diagram	2.47	150	0.5	0.5		40	3,000	2.0	30	20	10-500Hz; 2G	10	83	191,000	1.7	UL/CUL/TUV/CE	173403CP	91.95	82.79	65.95
Mean Well	SP-150-48	48V@0-3.2A	153.6W	85-264@47-63	✔	see diagram	see diagram	2.52	250	0.5	0.5		40	3,000	2.0	30	20	10-500Hz; 2G	10	84	191,000	1.7	UL/CUL/TUV/CE	201929CP	91.95	82.79	65.95
Mean Well	TP-150A	5V@2-15A; 12V@0.4-6A; -5V@0-0.6A	150.0W	90-264@47-63	✔	see diagram	see diagram	2.75	100	3.0	1.0		45	3,000	3.5	60	20	10-500Hz; 2G	10	75	161,600	1.8	UL/CUL/TUV/CE	213858CP	149.95	134.95	100.49
Mean Well	TP-150B	5V@2-15A; 12V@0.4-5.5A; -12V@0-0.6A	148.2W	90-264@47-63	✔	see diagram	see diagram	2.71	100	3.0	1.0		45	3,000	3.5	60	20	10-500Hz; 2G	10	77	161,600	1.8	UL/CUL/TUV/CE	213840CP	149.95	134.95	100.49
Mean Well	TP-150C	5V@2-15A; 15V@0.4-4.5A; -15V@0-0.6A	151.5W	90-264@47-63	✔	see diagram	see diagram	2.77	100	3.0	1.0		45	3,000	3.5	60	20	10-500Hz; 2G	10	77	161,600	1.8	UL/CUL/TUV/CE	213831CP	149.95	134.95	100.49
Mean Well	TP-150D	5V@2-15A; 24V@0.4-3A; 12V@0-0.6A	154.2W	90-264@47-63	✔	see diagram	see diagram	2.82	100	3.0	1.0		45	3,000	3.5	60	20	10-500Hz; 2G	10	78	161,600	1.8	UL/CUL/TUV/CE	213823CP	149.95	134.95	100.49
Mean Well	QP-150-3B	3.3V@0-10A; 5V@3-10A; 12V@0-4.5A; -12V@0-0.6A	150.2W	90-264@47-63	✔	see diagram	see diagram	2.47	100	2.0	1.0		45	3,000	3.5	50	16	10-500Hz; 2G	10	75	141,500	1.8	UL/CUL/TUV/CE	213633CP	169.95	152.95	112.59
Mean Well	QP-150D	5V@3-10A; 12V@0-4A; 24V@0.4-2A; -12V@0-0.6A	150.2W	90-264@47-63	✔	see diagram	see diagram	2.47	120	2.0	1.0	↔	45	3,000	3.5	50	16	10-500Hz; 2G	10	78	141,500	1.8	UL/CUL/TUV/CE	213655CP	169.95	152.95	112.59
Mean Well	QP-150F	5V@3-10A; 15V@0-3A; 24V@0.4-2A; -15V@0-0.6A	152.0W	90-264@47-63	✔	see diagram	see diagram	2.50	120	2.0	1.0		45	3,000	3.5	50	16	10-500Hz; 2G	10	78	141,500	1.8	UL/CUL/TUV/CE	213647CP	169.96	152.95	112.59

* Primary Output

Enclosed

SALE — Limited Supply – Special Offers – 90-Day Warranty — **SALE**

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Volgen	EXU-05030	5V@30A	150.0W	100/120@50-60	—	7.7x3.7x2.3	5.0x2.2x0.16	2.29	—	0.8	0.4		30	2,000	0.5	200	—	10-55Hz; 20G	10	80	—	1.6	UL/CSA	205701CP	$34.95	$31.49	$28.35
Volgen	EXU-15010	15V@10A	150.0W	100-120@50-60	—	7.7x3.8x2.3	5.0x2.2x0.16	2.23	—	0.8	0.4		30	2,000	0.5	200	—	10-55Hz; 20G	10	80	—	1.9	UL/CSA	205743CP	34.95	31.49	28.35
Volgen	MRE-15010U	15V@10A	150.0W	120/240@50-60	—	9.6x4.1x2.4	—	1.59	—	—	—		—	—	—	—	—	—	—	—	—	—	UL/CSA/TUV	206009CP	34.95	31.49	28.35
Globtek	RT-3S150-24	24V@6.5A	150.0W	115/230@50-60	—	7.9x4.3x1.9	6.8x3.8x0.14	2.32	100	5.0	5.0	↔	35	3,000	3.5	—	20	—	5	80	50,000	1.8	UL/CE	199515CP	69.95	62.99	56.69
SSI	SQV140-1333	5V@20A; 15V@5A; 15V@3A; 15V@3A	140.0W	120/240@50-60	—	10.5x5.0x2.5	8.9x3.9x0.12	1.07	50	1.0	0.2		15	3,750	—	—	16	—	5	75	—	4.6	UL/CSA/TUV	205663CP	22.29	20.25	18.25

* Primary Output

POWER

POWER
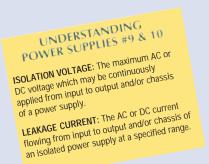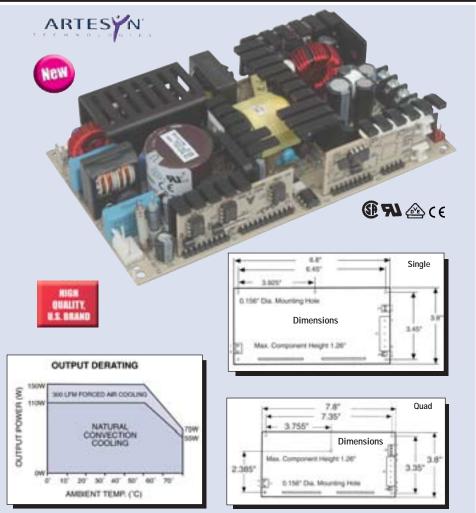
150-Watt Open Frame
With Power Factor Correction

NLP150 Series: Single & Quad Output

- 100% full-load burn-in
- 4.5 watts/in³
- 150W with 300LFM of air
- 1U package: 6.8" x 3.8" x 1.3"
- Parallel operation (current sharing)
- Mating connectors: P/N 104432CP & 103587CP, pg 119
- 0° to +70°C working temperature (see output derating)
- Universal AC input
- Power Factor Correction
- Two-year warranty

Highlighted in blue below, the Artesyn NLP150 series are Power Factor Corrected to meet the EN61000-3-2 standard, and they support current sharing on V$_A$ and V$_B$. Standard features include universal input, over-voltage and short-circuit protection, as well as power fail detection. This series carries UL, CSA and VDE approvals; and are CE marked. With a height of only 1.26", these supplies are commonly used in 1U shelves and boxes, and are primarily intended for networking applications that have a heavy logic content, such as access concentrators, midrange routers, LAN switches and shared media hubs.

ARTESYN
TECHNOLOGIES

New

HIGH QUALITY. U.S. BRAND

Single
Dimensions
Max. Component Height 1.26"

Quad
Dimensions
Max. Component Height 1.26"

UNDERSTANDING POWER SUPPLIES #9 & 10

ISOLATION VOLTAGE: The maximum AC or DC voltage which may be continuously applied from input to output and/or chassis of a power supply.

LEAKAGE CURRENT: The AC or DC current flowing from input to output and/or chassis of an isolated power supply at a specified range.

OUTPUT DERATING
300 LFM FORCED AIR COOLING
NATURAL CONVECTION COOLING

150-Watt Open Frame
With Power Factor Correction

LPP-150 Series: Single Output

- 100% full-load burn-in
- No minimum load required
- 105°C output capacitor
- Power Factor Correction
- Mating connectors: P/N 215950CP & 215968CP, pg 124
- -10°C to +60°C working temperature (see output derating)
- Auto-switch AC input
- 3.6 watts/in³
- Three-year warranty
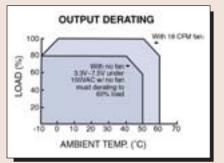
Detailed below in tan, the LPP-150 series is Mean Well's most powerful open-frame switching power supply. It features input Power Factor Correction that complies with EN61000-3-2 and achieves 0.98 at 115VAC. Couple this with the full-range universal input ranges of 85-264VAC and 120-370VDC, and these switchers are ready for use worldwide. Full 150-watt output power is available from 0°C to 50°C with 18 CFM of forced air cooling and 120-watts is available to -10°C and 60°C. Meeting the requirements of UL1950 and TUV EN60950, these products are approved by UL, CUL, and TUV; and carry the CE mark. The highly compact layout results in an impressive power density of 3.6 watts per inch³ and maximum height of 1.6".
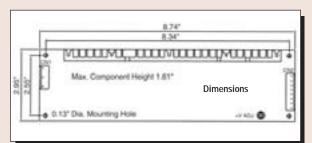
MW MEAN WELL

VALUE PRICED, HIGH QUALITY

UNDERSTANDING POWER SUPPLIES #11 & 12

INRUSH CURRENT: The peak instantaneous input current drawn by a power supply at turn-on.

LINE REGULATION: The change in output voltage in percent as the input voltage is varied over its specified limits, with load and temperature constant.

OUTPUT DERATING
With 18 CFM fan
With no fan, 3.3V - 7.5V under 100VAC w/ no fan must derating to 60% load

Dimensions
Max. Component Height 1.61"

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Artesyn	NLP150L-96S3	+3.3V@1-22A	72.6W	90-264@47-63	✔	see diagram	see diagram	2.16	50	2.0	2.0		40	3,000	0.99	—	20	5-500Hz; 2.4G	—	73	350,000	1.2	UL/VDE/CE	218991CP	$116.85	$99.95	$94.15
Artesyn	NLP150L-96S5	+5.1V@1-22A	112.2W	90-264@47-63	✔	see diagram	see diagram	3.34	50	2.0	2.0		40	3,000	0.99	—	20	5-500Hz; 2.4G	—	73	350,000	1.2	UL/VDE/CE	219011CP	116.85	99.95	94.15
Artesyn	NLP150L-96S8	+24V@0.15-4.6A	110.4W	90-264@47-63	✔	see diagram	see diagram	3.29	240	2.0	2.0	⟷	40	3,000	0.99	—	20	5-500Hz; 2.4G	—	73	350,000	1.2	UL/VDE/CE	219002CP	116.85	99.95	94.15
Artesyn	NLP150L-96Q5366	+3.3V@0.5-10A; +5.1V@1.5-20A; +12V@0-2A; +12V@0-0.65A	120.0W	90-264@47-63	✔	see diagram	see diagram	4.33	50	2.0	2.0		40	3,000	0.99	1500	20	5-500Hz; 2.4G	—	73	350,000	1.2	UL/CSA/VDE/CE	219029CP	116.85	99.95	94.15
Mean Well	LPP-150-5	+5V@0-30A	150.0W	85-264@47-63	✔	see diagram	see diagram	3.59	100	1.0	0.5		40	3,000	3.5	30	20	10-500Hz; 2G	10	72	191,000	1.2	UL/CUL/TUV/CE	213698CP	66.95	60.29	51.25
Mean Well	LPP-150-12	+12V@0-12.5A	150.0W	85-264@47-63	✔	see diagram	see diagram	3.59	100	1.0	0.5	⟷	40	3,000	3.5	30	20	10-500Hz; 2G	10	79	191,000	1.2	UL/CUL/TUV/CE	213680CP	66.95	60.29	51.25
Mean Well	LPP-150-24	+24V@0-6.3A	150.0W	85-264@47-63	✔	see diagram	see diagram	3.59	150	0.5	0.5		40	3,000	3.5	30	20	10-500Hz; 2G	10	83	191,000	1.2	UL/CUL/TUV/CE	213671CP	66.95	60.29	51.25
Mean Well	LPP-150-48	+48V@0-3.2A	153.6W	85-264@47-63	✔	see diagram	see diagram	3.68	250	0.5	0.5		40	3,000	3.5	30	20	10-500Hz; 2G	10	83	191,000	1.2	UL/CUL/TUV/CE	216645CP	66.95	60.29	51.25

Other Versions Available: Call 800-831-4242

Open Frame

* Primary Output

SALE

SALE

	Limited Supply – Special Offers – 90-Day Warranty													Limited Supply – Special Offers – 90-Day Warranty													
Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
EOS	VLT130-1100	+5V@0.5-26A	130.0W	100-240@50-60	✔	5.1x3.1x0.8	4.6x2.6x0.16	10.28	50	1.0	0.3		40	—	—	10	15	—	—	82	200,000	0.6	UL/VDE/CE	185560CP	$10.25	$9.35	$8.45
Digital Power	USS150-124	+24V@6A	150.0W	90-250@47-63	—	6.9x3.9x1.5	—	3.72	—	—	—		—	—	—	—	—	—	—	—	88,000	1.4	UL/CUL/CSA/TUV/CE	204572CP	31.95	28.79	25.89
Power-One	MAP140-1024	+24V@5.8A	140.0W	85-264@47-63	—	7.0x4.3x1.9	6.5x3.8x0.17	2.45	240	0.5	1.0		41	2,600	0.5	20	20	10-2kHz; 6G	—	70	180,000	1.5	UL/CSA/TUV/CE	204601CP	29.95	26.99	24.29
Power-One	MPU1503300S240	+3.3V@30A; +12V@3A	135.0W	85-250@50-60	—	8.1x4.2x1.5	6.5x3.8x0.16	2.65	50	1.5	0.6	⟷	35	2,600	0.13	20	20	10-2kHz; 6G	—	75	340,000	1.9	UL/CSA/TUV	208670CP	29.95	26.99	24.29
Cherokee	MQT154A1†	+3.3V@8A; +5V@26A; +12V@6A; -12V@1A	150.0W	100-240@47-63	—	8.0x4.3x1.5	6.4x2.5x0.13	2.91	—	—	—		—	—	—	—	—	—	—	—	—	2.0	UL/CSA	220193CP	28.95	23.19	17.39
EOS	VLT130-4100	+3.3V@0.5-16A; +5V@0.5-14A; +12V@0.1-1.5A; -12V@0.1-1.5A	130.0W	100-240@50-60	✔	5.0x3.0x0.9	4.6x2.6x0.16	9.63	50	1.0	0.3		40	—	—	10	15	—	—	82	200,000	0.7	UL/CUL/VDE/CE	210876CP	19.95	17.95	15.95
Cherokee	QT24A1V	+5V@15A; +12V@5A; -5V@1A; -12V@1A	150.0W	115-240@50-60	—	6.8x3.9x1.5	6.4x2.5x0.08	3.77	50	5.0	5.0		35	2,600	—	—	16	—	—	75	—	1.4	UL/CSA/TUV	203431CP	29.95	26.95	23.95

Open Frame

Open Frame

* Primary Output   † 8" power cord included

POWER

POWER

Color Code Legend
New | Sale | Qty. Save | Closeout

200-Watt Enclosed
With Power Factor Correction
SP-200 Series: Single Output
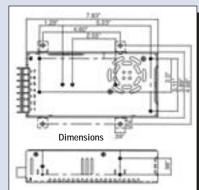
- 100% full-load burn-in
- Universal AC input
- No minimum load required
- Power Factor Correction
- Three-year warranty
- 105˚C output capacitor
- 3.3 watts/in³
- Built-in fan cooling
- Mating connectors:
  P/Ns 103587CP, pg 119
- -10˚ to +60˚C working temperature
  (see output derating)
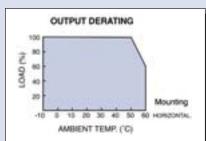
Detailed below in blue, this advanced switcher line is part of Mean Well's family of premium power supplies that carry an unusually long three-year warranty. Their performance, reliability and low cost result from a modern state-of-the-art design using highly integrated components. The SP-200 offers input Power Factor Correction that meets EN61000-3-2, required in Europe for power supplies 75 watts and above. Assured to operate correctly anywhere in the world, these open-frame switchers feature universal voltage input ranges of 85-264VAC and 120-370VDC. The built-in cooling fan operates automatically from both thermal and load-based sensors. These products are approved by UL, CUL, and TUV; and carry the CE mark, for use worldwide. The EMC standards met are EN55022 Class B and EN61000-4-2/3/4/5/6/8/11.

VALUE PRICED, HIGH QUALITY

Dimensions

c RU us   RU   CE

OUTPUT DERATING
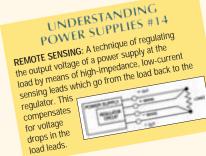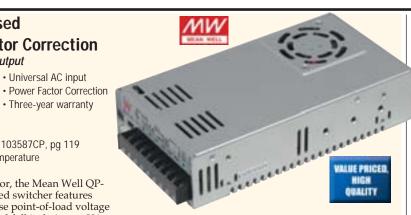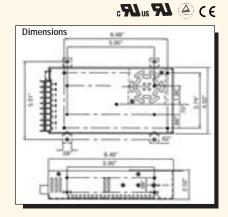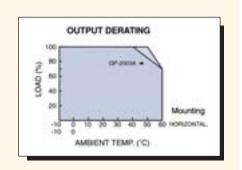
200-Watt Enclosed
With Power Factor Correction
QP-200 Series: Quad Output

- 100% full-load burn-in
- Universal AC input
- Remote sense
- Power Factor Correction
- 105˚C output capacitor
- Three-year warranty
- Built-in fan cooling
- 3.3 watts/in³
- Mating connectors: P/Ns 103587CP, pg 119
- -10˚ to +60˚C working temperature
  (see output derating)

Shown below in buff color, the Mean Well QP-200 quad-output, enclosed switcher features remote sensing for precise point-of-load voltage control on V1 and V2, and full isolation on V4. The built-in cooling fan assures safe operation at full power output over the ambient temperature range of -10°C to 50°C, with derating to 60°C (see below). The impressive performance, reliability and low-cost of the QP-200 series results from a modern state-of-the-art design using highly integrated components. It offers input Power Factor Correction that meets EN61000-3-2, required in Europe for power supplies 75 watts and above. Assured to operate correctly anywhere in the world, these open-frame switchers feature universal voltage input ranges of 90-264VAC and 127-370VDC. These products are approved by UL, CUL and TUV; and carry the CE mark, for worldwide use. The QP-200 series meets EMC standards EN55022 Class B and EN61000-4-2/3/4/5/6/8/11.

Dimensions

VALUE PRICED, HIGH QUALITY

c RU us   RU   CE

OUTPUT DERATING

240-Watt Enclosed
S-240 Series: Single Output

- 100% full-load burn-in
- Auto-switch AC input
- No minimum load required
- 3.3 watts/in³
- 105˚C output capacitor
- Auto cooling fan
- Two-year warranty
- Mating connectors: 103587CP, pg 119
- -10˚C to +60˚C working temp.
  (see output derating)

Highlighted below in tan, with a built-in cooling fan that operates from an automatic thermal switch, the workhorse Mean Well S-240 produces 240 watts of power from 0°C to 50°C, and is derated to -10°C and 60°C (see below). The input features an auto-sensing circuit that switches between 88-132VAC and 176-264VAC. The impressive reliability derives from a conservative design, the exclusive use of high-quality components, and 100% full-load burn-in. Protection includes short-circuit, overload and over-voltage. A novel soft-start circuit limits the AC surge current. Guaranteed safety standards comprise UL1950 and TUV EN60950, and these products carry the European CE mark. The DC output voltage can be adjusted ±10% of nominal rating.

Dimensions

VALUE PRICED, HIGH QUALITY

c RU us   RU   CE

OUTPUT DERATING

Other Versions Available: Call 800-831-4242

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	Price 10	Price 50
Mean Well	SP-200-3.3	+3.3V@0-40A	132.0W	85-264@47-63	✔	see diagram	see diagram	2.17	100	1.0	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	65	183,000	1.9	UL/CUL/TUV/CE	212417CP	$102.95	$92.69	$73.39
Mean Well	SP-200-5	+5V@0-40A	200.0W	85-264@47-63	✔	see diagram	see diagram	3.29	100	1.0	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	71	183,000	1.9	UL/CUL/TUV/CE	202041CP	102.95	92.69	73.39
Mean Well	SP-200-12	+12V@0-16.7A	200.4W	85-264@47-63	✔	see diagram	see diagram	3.29	100	0.5	0.5	↔	40	3,000	2.0	30	20	10-500Hz: 2G	10	79	183,000	1.9	UL/CUL/TUV/CE	194773CP	102.95	92.69	73.39
Mean Well	SP-200-13.5	+13.5V@0-14.9A	201.1W	85-264@47-63	✔	see diagram	see diagram	3.31	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	80	183,000	1.9	UL/CUL/TUV/CE	212409CP	102.95	92.69	73.39
Mean Well	SP-200-15	+15V@0-13.4A	201.0W	85-264@47-63	✔	see diagram	see diagram	3.30	100	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	81	183,000	1.9	UL/CUL/TUV/CE	202059CP	102.95	92.69	73.39
Mean Well	SP-200-24	+24V@0-8.4A	201.6W	85-264@47-63	✔	see diagram	see diagram	3.31	150	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	83	183,000	1.9	UL/CUL/TUV/CE	194781CP	102.95	92.69	73.39
Mean Well	SP-200-48	+48V@0-4.2A	201.6W	85-264@47-63	✔	see diagram	see diagram	3.31	250	0.5	0.5		40	3,000	2.0	30	20	10-500Hz: 2G	10	84	183,000	1.9	UL/CUL/TUV/CE	202067CP	102.95	92.69	73.39
Mean Well	QP-200-3B	+3.3V@0-15A; +5V@3-15A; +12V@0.5-6A; -12V@0-0.7A	204.9W	90-264@47-63	✔	see diagram	see diagram	2.50	100	2.0	1.0	↔	45	3,000	2.0	50	16	10-500Hz: 2G	10	72	160,600	2.4	UL/CUL/TUV/CE	213743CP	179.95	162.79	120.95
Mean Well	QP-200-3D	+3.3V@0-15A; +5V@3-10A; +24V@0.4-4A; -12V@0-0.7A	203.9W	90-264@47-63	✔	see diagram	see diagram	2.49	100	2.0	1.0		45	3,000	2.0	50	16	10-500Hz: 2G	10	74	160,600	2.4	UL/CUL/TUV/CE	213735CP	179.95	162.79	120.95
Mean Well	QP-200D	+5V@3-15A; +12V@0-4A; +24V@0.4-3A; -12V@0-0.7A	203.4W	90-264@47-63	✔	see diagram	see diagram	2.40	100	2.0	1.0		45	3,000	2.0	50	16	10-500Hz: 2G	10	75	160,600	2.4	UL/CUL/TUV/CE	213751CP	179.95	162.79	120.95
Mean Well	S-240-5	+5V@0-40A	200.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.60	150	1.0	0.5		18	3,000	1.2	20	20	10-500Hz: 2G	10	78	179,000	2.5	UL/CUL/TUV/CE	202083CP	97.95	88.19	84.49
Mean Well	S-240-12	+12V@0-18A	216.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.81	150	0.5	0.5		18	3,000	1.2	20	20	10-500Hz: 2G	10	82	179,000	2.5	UL/CUL/TUV/CE	137648CP	97.95	88.19	84.49
Mean Well	S-240-15	+15V@0-15A	225.0W	88-132/176-264@47-63	—	see diagram	see diagram	2.92	150	0.5	0.5	↔	18	3,000	1.2	20	20	10-500Hz: 2G	10	83	179,000	2.5	UL/CUL/TUV/CE	202075CP	97.95	88.19	84.49
Mean Well	S-240-24	+24V@0-10A	240.0W	88-132/176-264@47-63	—	see diagram	see diagram	3.12	180	0.5	0.5		18	3,000	1.2	20	20	10-500Hz: 2G	10	84	179,000	2.5	UL/CUL/TUV/CE	137656CP	97.95	88.19	84.49
Mean Well	S-240-48	+48V@0-5A	240.0W	88-132/176-264@47-63	—	see diagram	see diagram	3.12	240	1.0	1.0		18	3,000	1.2	20	20	10-500Hz: 2G	10	87	179,000	2.5	UL/CUL/TUV/CE	167337CP	97.95	88.19	84.49

Enclosed

* Primary Output

Color Code Legend
New | Sale | Qty. Save | Closeout

240 to 375-Watt Switching DC Power Supplies

240 to 375-Watt Switching DC Power Supplies

POWER

POWER

Color Code Legend
New Sale Qty. Save Closeout

300-Watt Enclosed
With Power Factor Correction
SP-300 Series: Single Output
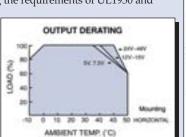
MEAN WELL — VALUE PRICED, HIGH QUALITY

- 100% full-load burn-in
- No minimum load required
- Power Factor Correction
- 105°C output capacitor
- Universal AC input
- 3.9 watts/in³
- Auto cooling fan
- Three-year warranty
- Mating connectors: P/Ns 103587CP, pg 119
- -10° to +60°C working temp. (see output derating)
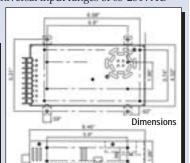
Detailed below in blue, the Mean Well SP-300 series features input Power Factor Correction that meets EN61000-3-2, required in Europe for power supplies 75 watts and above. These advanced switchers are part of Mean Well's family of premium power supplies that carry an unusually long three-year warranty. Couple this with the full range universal input ranges of 85-264VAC and 120-370VDC, and these switchers are ready for use worldwide. Meeting the requirements of UL1950 and TUV EN60950, they are approved by UL and TUV, and carry the CE mark. The high-density enclosed packaging and a power density of 2.5 watts per inch³. Protection includes short-circuit, overload and over-voltage.

OUTPUT DERATING

Dimensions
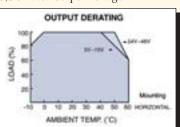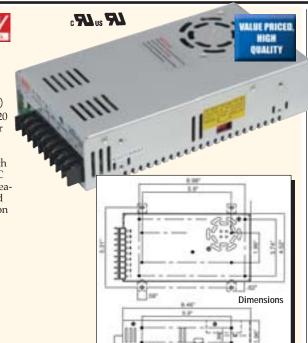
320-Watt Enclosed
S-320 Series: Single Output

MEAN WELL — VALUE PRICED, HIGH QUALITY

- 100% full-load burn-in
- No minimum load required
- 105°C output capacitor
- Mating connectors: P/Ns 103587CP, pg 119
- -10° to +60°C working temp. (see output derating)
- Auto cooling fan
- 4.2 watts/in³
- Two-year warranty

Shown below in buff color, the workhorse S-320 series has long been amongst the most popular series of Mean Well enclosed power supplies. Full 320 watts of power is available over the ambient temperature range of 0°C to 50°C. With derating (see below) the range extends to -10°C and 60°C. The solid, reliable, low-cost design features overload protection to 135% of rated load with auto-recovery, and over-voltage protection to 145% of rated output voltage.

OUTPUT DERATING

Dimensions

375-Watt Enclosed
With Power Factor Correction
QP-375 Series: Quad Output

MEAN WELL — VALUE PRICED, HIGH QUALITY — New
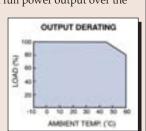
- 100% full-load burn-in
- 2.8 watts/in³
- Auto cooling fan
- 105°C output capacitor
- Universal AC input
- Remote sense
- Three-year warranty
- Mating connectors: 103587CP, pg 119
- -10°C to +60°C working temp. (see output derating)
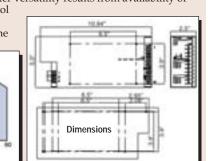
Highlighted below in tan, the Mean Well QP-375 series is a unique quad-output switcher design that offers no minimum current requirement for V2 & V3. Additionally, both V1 and V2 are fully isolated so they can be operated with ± polarity. Greater versatility results from availability of remote sensing for precise point-of-load voltage control and a "power good / fail signal". The built-in cooling fan assures safe operation at full power output over the ambient temperature range of -10°C to 45°C, with derating to 60°C (see below). The QP-375 series offers input Power Factor Correction that meets EN61000-3-2. This enclosed switcher line features universal voltage input ranges of 90-264VAC & 120-370VDC.

OUTPUT DERATING

Dimensions

Other Versions Available: Call 800-831-4242

| Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	Price 10	Price 50
Mean Well	SP-300-5	+5V@0-50A	250.0W	88-264@47-63	✓	see diagram	see diagram	3.09	150	1.0	0.5		18	3,000	1.0	50	20	10-500Hz: 2G	10	75	168,000	2.6	UL/CUL/TUV/CE	202091CP	$175.95	$158.39	$115.39
Mean Well	SP-300-12	+12V@0-24A	288.0W	88-264@47-63	✓	see diagram	see diagram	3.56	150	0.5	0.3		18	3,000	1.0	50	20	10-500Hz: 2G	10	83	168,000	2.6	UL/CUL/TUV/CE	137390CP	175.95	158.39	115.39
Mean Well	SP-300-13.5	+13.5V@0-21A	285.0W	88-264@47-63	✓	see diagram	see diagram	3.52	150	0.5	0.3		18	3,000	1.0	50	20	10-500Hz: 2G	10	83	168,000	2.6	UL/CUL/TUV/CE	212396CP	175.95	158.39	115.39
Mean Well	SP-300-15	+15V@0-19A	285.0W	88-264@47-63	✓	see diagram	see diagram	3.52	150	0.5	0.3	↔	18	3,000	1.0	50	20	10-500Hz: 2G	10	83	168,000	2.6	UL/CUL/TUV/CE	202104CP	175.95	158.39	115.39
Mean Well	SP-300-24	+24V@0-12.5A	300.0W	88-264@47-63	✓	see diagram	see diagram	3.70	150	0.5	0.2		18	3,000	1.0	50	20	10-500Hz: 2G	10	85	168,000	2.6	UL/CUL/TUV/CE	137402CP	175.95	158.39	115.39
Mean Well	SP-300-48	+48V@0-6.25A	300.0W	88-264@47-63	✓	see diagram	see diagram	3.70	240	0.5	0.2		18	3,000	1.0	50	20	10-500Hz: 2G	10	85	168,000	2.6	UL/CUL/TUV/CE	161980CP	175.95	158.39	115.39
Mean Well	S-320-5	+5V@0-50A	250.0W	88-132/176-264@47-63	—	see diagram	see diagram	3.27	150	1.0	0.5		20	3,000	3.5	20	20	10-500Hz: 2G	10	77	188,000	2.5	UL/CUL	216776CP	129.95	116.95	90.89
Mean Well	S-320-7.5	+7.5V@0-36A	270.0W	88-132/176-264@47-63	—	see diagram	see diagram	3.53	150	0.5	0.5		20	3,000	3.5	20	20	10-500Hz: 2G	10	80	188,000	2.5	UL/CUL	207212CP	129.95	116.95	90.89
Mean Well	S-320-12	+12V@0-25A	300.0W	88-132/176-264@47-63	—	see diagram	see diagram	3.92	150	0.5	0.5		20	3,000	3.5	20	20	10-500Hz: 2G	10	82	188,000	2.5	UL/CUL	207204CP	129.95	116.95	90.89
Mean Well	S-320-24	+24V@0-12.5A	300.0W	88-132/176-264@47-63	—	see diagram	see diagram	3.92	150	0.5	0.5	↔	20	3,000	3.5	20	20	10-500Hz: 2G	10	86	188,000	2.5	UL/CUL	196656CP	129.95	116.95	90.89
Mean Well	S-320-48	+48V@0-6.5A	312.0W	88-132/176-264@47-63	—	see diagram	see diagram	4.08	240	0.5	0.5		20	3,000	3.5	20	20	10-500Hz: 2G	10	87	188,000	2.5	UL/CUL	207191CP	129.95	116.95	90.89
Mean Well	QP-375-5A	+5V@3.5-30A; +12V@0-10A; +12V@0-6A; +12V@0-3A	378.0W	88-264@47-63	✓	see diagram	see diagram	2.77	100	0.8	0.5		45	3,000	2.0	50	20	10-500Hz: 2G	10	77	—	5.1	UL/CUL/TUV/CE	220302CP	352.95	297.95	264.95
Mean Well	QP-375-5B	+5V@3.5-30A; +12V@0-10A; +12V@0-6A; +5V@0-3A	357.0W	88-264@47-63	✓	see diagram	see diagram	2.62	100	0.8	0.5		45	3,000	2.0	50	20	10-500Hz: 2G	10	77	—	5.1	UL/CUL/TUV/CE	220290CP	352.95	297.95	264.95
Mean Well	QP-375-5D	+5V@3.5-30A; +12V@0-9A; +12V@0-4A; +24V@0-3A	378.0W	88-264@47-63	✓	see diagram	see diagram	2.77	100	0.8	0.5	↔	45	3,000	2.0	50	20	10-500Hz: 2G	10	78	—	5.1	UL/CUL/TUV/CE	220281CP	352.95	297.95	264.95
Mean Well	QP-375-24B	+24V@1-10A; +5V@0-10A; +12V@0-4A; +12V@0-4A	386.0W	88-264@47-63	✓	see diagram	see diagram	2.83	240	0.8	0.5		45	3,000	2.0	50	20	10-500Hz: 2G	10	78	—	5.1	UL/CUL/TUV/CE	220273CP	352.95	297.95	264.95

Enclosed

* Primary Output

Limited Supply – Special Offers – 90-Day Warranty

SALE

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*		Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	Price 10	Price 50
Digital Power	USS250-115	+15V@0-16.5A	250.0W	90-250@47-63	—	8.0x4.5x2.0	7.6x3.2x0.08	3.47	50	1.0	0.2		25	—	—	—	16	5-500Hz; 0.75G	—	80	140,000	1.7	UL/CUL/CSA/TUV/CE	204564CP	$49.95	$44.99	$40.49
Cherokee	QP2A2-1A-A	+5V@40A; +12V@2.5A	230.0W	115/230@50-60	—	10.0x4.3x2.5	7.5x3.0x0.15	2.14	50	0.25	0.25		35	—	—	—	20	—	5	75	—	3.4	TUV	196795CP	15.65	14.25	12.95
Digital Power	UP300-201	+5V@1-40A; +12V@0.2-12A	300.0W	90-250@47-63	—	8.0x4.5x2.0	7.6x3.2x0.10	4.17	50	1.0	0.2	↔	25	—	—	—	16	5-500Hz; 0.75G	—	75	190,000	2.0	UL/CUL/CSA/TUV/CE	204581CP	59.95	44.99	31.49
SSI	SQM200-1221	+5V@30A; +12V@7A; +12V@5A; ±5V@5A	200.0W	100/240@50-60	—	10.5x5.0x2.5	10.0x4.4x0.14	1.52	50	1.0	0.2		15	3,750	—	—	16	—	—	75	—	5.5	UL/CSA/TUV	206906CP	39.95	35.95	35.95
Digital Power	USS256-351	+5.5V@1.8A; +12.9V@10A; +12.9V@0.9A	250.0W	90-250@47-63	—	10.0x4.5x1.9	—	—	—	—	—		—	—	—	—	16	—	—	—	140,000	1.9	UL/CUL/CSA/TUV/CE	208733CP	49.95	44.99	40.49
Astec	LPQ252	+5V@3-35A; +12V@0-10A; -12V@0-6A; ±5 to ±25V@0-6A	250.0W	100/250@50-60	✓	9.0x5.0x2.0	—	2.78	50	—	—		20	—	0.5	—	20	5-500Hz; 0.7G	5	75	550,000	2.0	UL/CSA/VDE/CE	203342CP	49.95	44.95	39.95
Lambda	WA305-00-03	+5V@50A; +12V@10A; +24V@4A; -5.2V@4A; -12V@4A	300.0W	85-264@45-440	—	11.9x5.0x1.8	8.1x2.5x0.16	2.80	50	1.0	0.2	↔	20	4,000	—	—	18	—	—	80	—	5.5	CE	210905CP	49.95	44.95	39.95
SSI	STM350-1022	+5V@50A; +12V@5A; +12V@8A	350.0W	120/240@50-60	—	13.5x5.0x2.5	—	2.07	—	2.0	0.3		20	—	—	—	16	—	10	75	—	5.5	UL/TUV	205647CP	33.35	29.99	26.99
TODD	MAX3541205AC	+5V@50A; +12V@12A; -5V@2A; -12V@4A	350.0W	115/230@50-60	—	9.0x5.0x2.5	6.5x3.9x0.08	3.11	50	1.0	1.0		10	—	—	—	16	—	5	80	—	2.0	TUV	196461CP†	47.95	38.49	28.79

Open Frame

Enclosed

* Primary Output   † Pull

Color Code Legend
New Sale Qty. Save Closeout

500-Watt Enclosed With Power Factor Correction
SP-500 Series: Single Output
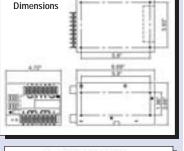
MEAN WELL

VALUE PRICED, HIGH QUALITY

- 100% full-load burn-in
- No minimum load required
- Power Factor Correction
- Remote control
- Universal AC input
- 3.6 watts/in³
- Auto cooling fan
- Three-year warranty
- 105˚C output capacitor
- Mating connectors: P/Ns 103587CP pg 119
- -10˚ to +60˚C working temp. (see output derating)
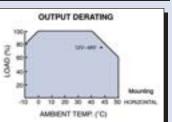
Detailed below in blue, this advanced switcher line is part of Mean Well's family of premium power supplies that carry an unusually long three-year manufacturers warranty. Their performance, reliability and low cost result from a modern state-of-the-art design using highly integrated components. The SP-500 offers input Power Factor Correction of 0.98 at 115VAC that meets EN61000-3-2, required in Europe for power supplies 75 watts and above. Assured to operate correctly anywhere in the world, these enclosed switchers feature universal voltage input ranges of 88-264VAC and 124-370VDC. The SP-500 is cooled with an automatic internal fan. These products are approved by UL, CUL, and TUV; and carry the CE mark, for use worldwide. EMC standards met are EN55022 Class B and EN61000-4-2/3/4/5/6/8/11.

cRUus RU CE

Dimensions

OUTPUT DERATING

UNDERSTANDING POWER SUPPLIES #16
PARALLEL OPERATION (CURRENT SHARING):
The connection of the outputs of two or more power supplies of the same output voltage to obtain a higher output current than from either supply alone. This requires power supplies specifically designed to share the load.

500 & 1000-Watt Enclosed With Power Factor Correction & Current Sharing
PSP-500 & PSP-1000 Series: Single Output
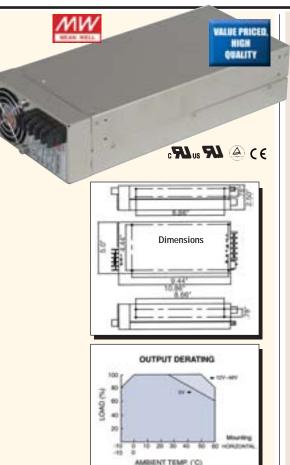
MEAN WELL

VALUE PRICED, HIGH QUALITY

- 100% full-load burn-in
- No minimum load required
- 105˚C output capacitor
- Parallel operation (current sharing)
- Remote sense and control
- Power Factor Correction
- Mating connectors: P/Ns 103587CP, pg 119
- -10˚ to +60˚C working temp. (see output derating)
- Universal AC input
- 3.6 watts/in³
- Three-year warranty
- Auto cooling fan

Highlighted below in buff color, these families of feature rich, high-quality, low-cost switchers provide parallel operation to 2000 watts, Power Factor Correction of 0.98 at 115VAC that complies with EN61000-3-2, remote sensing for precise point-of-load voltage control, and ON-OFF remote control. Greater versatility results from availability of a "power good/fail signal". Cooling is provided by an integral forced air fan (two in the PSP-1000) that assures safe operation at full power output over the ambient temperature range of 0˚C to 50˚C, with derating -10˚C and 60˚C at 80% of load. Protection includes short-circuit, overload over-voltage; and a novel soft-start circuit limits the AC surge current. Guaranteed safety standards comprise UL1950 and TUV EN60950, and they carry the European CE mark. The PSP-500 and the PSP-1000 series meet EMC standards EN55022 Class B and EN61000-4-2/3/4/5/6/8/11.

cRUus RU CE

Dimensions

OUTPUT DERATING

600-Watt Enclosed With Current Sharing
SCN-600 Series: Single Output

MW

MEAN WELL
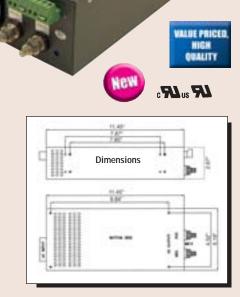
- 100% full-load burn-in
- Auto cooling fan
- No minimum load required
- 4.2 watts/in³
- 105˚C output capacitor
- Two-year warranty
- Parallel operation (current sharing)
- Remote sense and control
- Mating connectors: P/Ns 103587CP, pg 119
- -10˚ to +65˚C working temperature; (+50˚ to -65˚C @ 50% load)

VALUE PRICED, HIGH QUALITY

New

cRUus RU

Shown below in tan, the SCN-600 family of 600-watt enclosed switchers offer advanced N+1 parallel operation, remote sensing for precise point-of-load voltage control and built-in remote ON-OFF control. Also, a unique capability allows output voltage adjustment from 10-100% of rated value with an external 1-5VDC signal. The input can be switch selected for voltage ranges of 100-130VAC and 200-260VAC. The DC output voltage can be adjusted ±5% of nominal rating. The solid, reliable, low-cost design features overload protection to 135% of rated load with auto-recovery, and over-voltage protection to 145% of rated output voltage. Additional protection includes short-circuit and a soft-start circuit that limits the AC surge current to a safe value. Meeting the requirements of UL1950 and TUV EN60950, these products are approved by UL, CUL and TUV; and carry the CE mark.

Dimensions

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*	Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Mean Well	SP500-12	+12V@0-40A	480.0W	100-240@50-60	✔	see diagram	see diagram	3.60	240	0.5	0.5	18	3,000	3.5	50	20	10-500Hz; 2G	10	84	133,000	4.2	UL/CUL/TUV/CE	190692CP	$245.95	$221.39	$166.19
Mean Well	SP500-13.5	+13.5V@0-36A	486.0W	100-240@50-60	✔	see diagram	see diagram	3.65	240	0.5	0.5	18	3,000	3.5	50	20	10-500Hz; 2G	10	84	133,000	4.2	UL/CUL/TUV/CE	212388CP	245.95	221.39	166.19
Mean Well	SP500-15	+15V@0-32A	480.0W	100-240@50-60	✔	see diagram	see diagram	3.60	240	0.5	0.5	18	3,000	3.5	50	20	10-500Hz; 2G	10	83	133,000	4.2	UL/CUL/TUV/CE	213604CP	245.95	221.39	166.19
Mean Well	SP500-24	+24V@0-20A	480.0W	100-240@50-60	✔	see diagram	see diagram	3.60	240	0.5	0.5	18	3,000	3.5	50	20	10-500Hz; 2G	10	85.5	133,000	4.2	UL/CUL/TUV/CE	147053CP	245.95	221.39	166.19
Mean Well	SP500-27	+27V@0-18A	486.0W	100-240@50-60	✔	see diagram	see diagram	3.65	200	0.5	0.5	18	3,000	3.5	50	20	10-500Hz; 2G	10	86.5	133,000	4.2	UL/CUL/TUV/CE	190705CP	245.95	221.39	166.19
Mean Well	SP500-48	+48V@0-10A	480.0W	100-240@50-60	✔	see diagram	see diagram	3.60	300	0.5	0.5	18	3,000	3.5	50	20	10-500Hz; 2G	10	87	133,000	4.2	UL/CUL/TUV/CE	161795CP	245.95	221.39	166.19
Mean Well	PSP-500-5	+5V@0-80A	400.0W	90-264@47-63	✔	see diagram	see diagram	2.91	100	2.0	0.5	20	3,000	1.0	50	15	10-500Hz; 2G	10	76	130,100	5.5	UL/CUL/TUV/CE	202112CP	247.95	223.19	196.29
Mean Well	PSP-500-12	+12V@0-41.5A	498.0W	90-264@47-63	✔	see diagram	see diagram	3.62	150	0.5	0.3	20	3,000	1.0	50	15	10-500Hz; 2G	10	82	130,100	5.5	UL/CUL/TUV/CE	190713CP	247.95	223.19	196.29
Mean Well	PSP-500-15	+15V@0-33A	498.0W	90-264@47-63	✔	see diagram	see diagram	3.60	150	0.5	0.3	20	3,000	1.0	50	15	10-500Hz; 2G	10	82	130,100	5.5	UL/CUL/TUV/CE	202121CP	247.95	223.19	196.29
Mean Well	PSP-500-24	+24V@0-20.8A	499.2W	90-264@47-63	✔	see diagram	see diagram	3.63	150	0.5	0.2	20	3,000	1.0	50	15	10-500Hz; 2G	10	84	130,100	5.5	UL/CUL/TUV/CE	190721CP	247.95	223.19	196.29
Mean Well	PSP-500-27	+27V@0-18.5A	499.5W	90-264@47-63	✔	see diagram	see diagram	3.63	150	0.5	0.2	20	3,000	1.0	50	15	10-500Hz; 2G	10	84	130,100	5.5	UL/CUL/TUV/CE	190730CP	247.95	223.19	196.29
Mean Well	PSP-500-48	+48V@0-10.5A	504.0W	90-264@47-63	✔	see diagram	see diagram	3.67	200	0.5	0.2	20	3,000	1.0	50	15	10-500Hz; 2G	10	86	130,100	5.5	UL/CUL/TUV/CE	190748CP	247.95	223.19	196.29
Mean Well	PSP-1000-5	+5V@0-145A	725.0W	90-264@47-63	✔	see diagram	see diagram	2.61	100	2.0	0.5	35	3,000	2.0	50	15	10-500Hz; 2G	10	76	—	10.4	UL/CUL/TUV/CE	217373CP	497.95	448.19	386.79
Mean Well	PSP-1000-12	+12V@0-75A	900.0W	90-264@47-63	✔	see diagram	see diagram	3.24	150	0.5	0.3	35	3,000	2.0	50	15	10-500Hz; 2G	10	82	—	10.4	UL/CUL/TUV/CE	217365CP	497.95	448.19	386.79
Mean Well	PSP-1000-24	+24V@0-37.6A	902.4W	90-264@47-63	✔	see diagram	see diagram	3.25	150	0.5	0.2	35	3,000	2.0	50	15	10-500Hz; 2G	10	84	—	10.4	UL/CUL/TUV/CE	217357CP	497.95	448.19	386.79
Mean Well	PSP-1000-48	+48V@0-19A	912.0W	90-264@47-63	✔	see diagram	see diagram	3.28	200	0.5	0.2	35	3,000	2.0	50	15	10-500Hz; 2G	10	86	—	10.4	UL/CUL/TUV/CE	217349CP	497.95	448.19	386.79
Mean Well	SCN-600-05	+5V@0-100A	500.0W	90-130/180-260@47-63	—	see diagram	see diagram	3.10	100	2.0	0.5	60	1,500	3.5	50	16	10-200Hz; 2G	5	77	—	5.7	UL/CUL	220249CP	248.95	213.95	197.95
Mean Well	SCN-600-12	+12V@0-50A	600.0W	90-130/180-260@47-63	—	see diagram	see diagram	3.72	120	1.0	0.5	60	1,500	3.5	50	16	10-200Hz; 2G	5	80	—	5.7	UL/CUL	220257CP	248.95	213.95	197.95
Mean Well	SCN-600-24	+24V@0-25A	600.0W	90-130/180-260@47-63	—	see diagram	see diagram	3.72	240	1.0	0.5	60	1,500	3.5	50	16	10-200Hz; 2G	5	85	—	5.7	UL/CUL	220265CP	248.95	213.95	197.95

Enclosed

* Primary Output

Other Versions Available: Call 800-831-4242

SALE — Limited Supply – Special Offers – 90-Day Warranty — SALE

Manufacturer	Manufacturer Product Number	Output Voltage@Current (min-max)	Power	Input (VAC @ Hz)	PFC	Size Inches (LxWxH)	Mounting Holes Inches (LxWxDia.)	Power Density (W/in³)	Ripple & Noise (mV p-p)*	Load Reg. (±%)*	Line Reg. (±%)*	Inrush Curr. (A) @120VAC	Isolation Voltage (VAC)	Leakage Current (mA@240V)	Rise Time (ms)	Hold-up Time (ms)	Vibration	Voltage Adjustment (%)*	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	50
Power-One	PFC-500-1024	24V@0.6-21A	500.0W	85-264@47-63	✔	9.0x5.0x2.6	6.6x3.9x0.13	4.27	240	0.2	0.5	35	2,600	2.0	10	20	5-2kHz; 1G	10	75	—	4.4	UL/CSA/TUV/CE	202905CP	$69.95	$62.99	$56.69
Power-One	PFC-500-1048	48V@1.2-10.4A	500.0W	85-264@47-63	✔	9.0x5.0x2.6	6.6x3.9x0.13	4.27	480	0.5	0.5	35	2,600	2.0	10	20	5-2kHz; 1G	10	75	—	3.7	UL/CSA/TUV/CE	202913CP	69.95	62.99	56.69

* Primary Output

Color Code Legend
New Sale Qty. Save Closeout

DC-to-DC Converters

Jameco has greatly expanded its DC-to-DC converter line by entering into a distribution agreement with Artesyn Technologies and expanding its breadth of Mean Well converters. Artesyn, a US brand, is a world leader in high-quality power conversion products for systems employing Distributed Power Architectures (DPA). And for value-pricing, Mean Well offers a broad line of high-quality products.

ARTESYN
TECHNOLOGIES

New
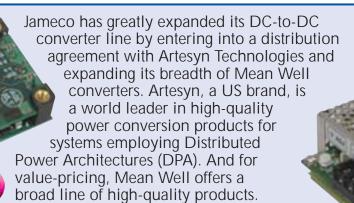
Now you can avoid the hassles of "large company" distribution channels and get immediate delivery of products from some of the world's top power products manufacturers. Be sure to see pages 33-43 for our complete line of DC-to-DC converters.

Power Products from a Name You Trust

Jameco continues to expand its commitment to DC-to-DC converters and switching power supplies. In addition to offering 11 converter product pages, new name brands and great savings, we're providing more of the information you need to make good technical choices. And if you have on-going needs, be sure to ask for an Inside Sales representative. You'll be assigned to the same rep order after order, so you can be assured we'll be aware of your unique requirements.

Save More in Larger Quantities!

Looking to save even more? We already guarantee the lowest price, but you can save even more when you purchase in larger quantities! Simply call us at 1-800-831-4242, ask for an Inside Sales rep, and let us know your specific requirements. Our inside sales representatives are there to get you the best value on your quantity purchases, and they'll make sure you get any additional service and information you need!

Save with Limited Supply Items

In addition to providing you with products suitable for long-term production runs, Jameco also continues to offer limited supply products at great savings. We've negotiated great deals for these limited supplies, and you can be assured we're passing the savings on to you. All our power supplies are backed by Jameco's 90-day warranty.

Easily Make Technical Selections from the Catalog

Now as part of our commitment to the expanding DC-to-DC converter line, we have added additional information to help you make informed technical decisions. You have more in-depth information, including output derating curves, package dimensions and specifications including output ripple, regulation, certifications, and more. Plus, the charts in this catalog allow you to easily compare specifications of multiple manufacturers' products. Need more help deciding? You can always call our toll-free tech support hot-line at 1-800-831-4242. Our senior technicians are available to help solve your power supply challenges.

OUTPUT DERATING

Dimensions

Ease of Ordering

Whether you need to buy 1, 10 or 100 products, you'll find ordering is easy at Jameco Electronics. You can call us any time of day or night, 365 days a year at 1-800-831-4242, fax your order to 1-800-237-6948 or place your order online at **www.Jameco.com/power**. We'll be ready to process your order. And remember, 99% of orders placed before 6 pm EST go out the same day, so you know you'll get your order quicker!

POWER

6-Amp SIL06 Series

ARTESYN TECHNOLOGIES

HIGH QUALITY, U.S. BRAND

- Ultra-wide trim range
- Horizontal and vertical models
- "Power good" signal
- Protection: over-current & short-circuit
- Working temperature: 0˚ to +80˚C (derated above 50˚C)
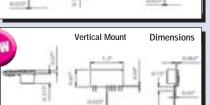
Highlighted below in blue, the SIL06 series are new high-density, open-frame, non-isolated DC-to-DC converters for space-sensitive applications. An external resistor adjusts the output voltage from its pre-set value of 0.9V to any value up to the 3.3V maximum. The SIL06 series offers remote ON/OFF and over-current protection as standard. With full international safety approval including EN60950 and UL60950, the SIL06 reduces compliance costs and time to market.

Horizontal Mount   Dimensions

Vertical Mount   Dimensions

New

10-Amp SIL10 Series

ARTESYN TECHNOLOGIES

New

- Highest power density: 107W/in³
- Remote sense
- 96% efficiency at 3.3V
- Protection: thermal & short-circuit
- Working temperature: -40˚ to +100˚C (derated above 70˚C)

HIGH QUALITY, U.S. BRAND
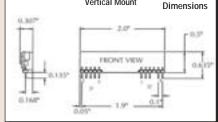
Detailed below in tan, the SIL10 series are non-isolated DC/DC converters packaged in a single-in-line footprint giving designers a cost-effective and easy-to-fit solution for conversion from either a 3.3V or 5V input voltage to an output voltage in the range of 0.8V-to-3.6V. The SIL10 offers both fixed outputs and wide output trim range, which allows maximum design flexibility and a pathway for future upgrades. The SIL10 is designed for applications that include distributed power, workstations, optical network and wireless applications.

Vertical Mount   Dimensions

FRONT VIEW

15-Amp SIL15 Series

ARTESYN TECHNOLOGIES

HIGH QUALITY, U.S. BRAND

New

- 91% efficiency
- Ultra-wide trim range
- "Power good" signal
- Protection: over-current & short-circuit
- Working temperature: 0˚ to +80˚C (derated above 50˚C)

Highlighted below in buff color, the SIL15 series are new high-density, open frame, non-isolated DC/DC converters for space-sensitive applications. Each model has a wide input range (4.5-to-5.5V or 10.2-to-13.8V) and offers a wide output voltage range of either 0.9-to-3.3V or 0.9-to-5V with a 15A load. An external resistor adjusts the output voltage from its pre-set value of 0.9V to any value up to the maximum allowed value for the model. With full international safety approval including EN60950 and UL/CUL60950, the SIL15 Series reduces compliance costs and time to market.

Vertical Mount   Dimensions

30-Amp SIL30 Series

- 91% efficiency
- Ultra-wide trim range
- Horizontal & vertical models
- "Power good" signal
- Protection: over-current, over-temperature & short-circuit
- Working temperature: 0˚ to +80˚C (derated above 50˚C)
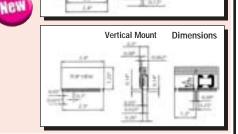
ARTESYN TECHNOLOGIES

HIGH QUALITY, U.S. BRAND

New

Highlighted below in rose color, the SIL30 series are new high-density, open-frame, non-isolated DC/DC converters for space sensitive applications. The converters have a wide input range (10.2-to-13.8VDC) and offer a wide 2.5-to-5V output voltage range with a 30A load.

Horizontal Mount   Dimensions

Vertical Mount   Dimensions

The SIL Series Converters above also have the following features:

• dI/dt: 10A/µs   • 100% burn-in test   • No minimum load   • Planar magnetics technology   • Very high MTBF   • Remote ON/OFF   • Two-year warranty

Mfr.	Manufacturer Product Number*	Input Range	Output Voltage Current	Power	Size Inches (LxWxH)	Pins	Line Reg. (±%)	Load Reg. (±%)	Temp. ˚C	Efficiency (%)	MTBF (hours)	Jameco Part Number	Price 1	10	25	100
Artesyn	SIL06-05SADJ-V	4.5V-5.5V	0.9-3.3V@6A	20W	see diagram	8	0.2	0.5	0 to +80	89	1,300,000	219150CP	$12.35	$11.69	$11.15	$10.59
Artesyn	SIL06-05SADJ-H	4.5V-5.5V	0.9-3.3V@6A	20W	see diagram	8	0.2	0.5	0 to +80	89	1,300,000	219168CP	12.35	11.69	11.15	10.59
Artesyn	SIL10-05S1V8-V	3.0V-5.5V	1.8V@10A	18W	see diagram	11	1.0	1.0	-40 to +100	92	7,042,000	219141CP	23.85	22.65	21.55	20.47
Artesyn	SIL10-05S2V5-V	3.0V-5.5V	2.5V@10A	25W	see diagram	11	1.0	1.0	-40 to +100	94	7,042,000	219133CP	23.85	22.65	21.55	20.47
Artesyn	SIL10-05W3V3-V	4.5V-5.5V	0.8-3.6V@10A	33W	see diagram	11	1.0	1.0	-40 to +100	95	7,042,000	219117CP	23.85	22.65	21.55	20.47
Artesyn	SIL10-05S3V3-V	4.5V-5.5V	3.3V@10A	33W	see diagram	11	1.0	1.0	-40 to +100	95	7,042,000	219125CP	23.85	22.65	21.55	20.47
Artesyn	SIL15-05SADJ-V	4.5V-5.5V	0.9V-3.3V@15A	50W	see diagram	13	0.2	0.5	0 to +80	89	7,817,000	218886CP	17.19	16.35	15.55	14.75
Artesyn	SIL15-12SADJ-V	10.2V-13.8V	0.9V-5V@15A	75W	see diagram	13	0.2	0.5	0 to +80	91	7,817,000	218878CP	17.19	16.35	15.55	14.75
Artesyn	SIL30-12SADJ-V	10.2V-13.8V	2.5V-5V@30A	150W	see diagram	24	0.2	1.0	0 to +80	91	129,000	218860CP	26.95	25.59	24.35	23.15
Artesyn	SIL30-12SADJ-H	10.2V-13.8V	2.5V-5V@30A	150W	see diagram	24	0.2	1.0	0 to +80	91	129,000	218851CP	26.95	25.59	24.35	23.15

* Suffix: V=Vertical; H=Horizontal

Color Code Legend — New Sale Qty. Save Closeout

POWER

0.5 & 1-Watt Regulated Encapsulated

SRS05 & SPR01 Series: Single Output

MW MEAN WELL

- 1000VDC isolation
- Protection: short-circuit
- 100% burn-in test
- Very high MTBF
- Working temperature: -15 to +60°C @ full load
  -25 to +71°C @ 80% load
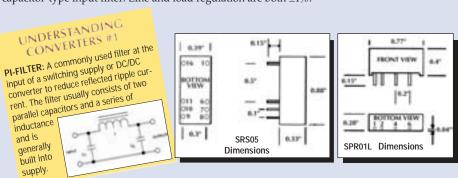
- Input filter: capacitor type
- No external components needed
- One-year warranty

Detailed below in blue, the Mean Well SRS05 and SPR01 series are low-cost, highly reliable, low-power, regulated 0.5-watt and 1.0- watt DC-to-DC converters that are easy to use because no external components are required. Internally they employ high-density SMD technology and are packaged in a non-conductive plastic case for safety. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 100MΩ and capacitance of 80pF maximum. Short-circuit protection is a standard feature and electrical noise is minimized with a capacitor-type input filter. Line and load regulation are both ±1%.

VALUE PRICED. HIGH QUALITY

UNDERSTANDING CONVERTERS #1

PI-FILTER: A commonly used filter at the input of a switching supply or DC/DC converter to reduce reflected ripple current. The filter usually consists of two parallel capacitors and a series of inductance and is generally built into supply.

SRS05 Dimensions

SPR01L Dimensions
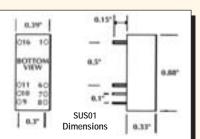
1-Watt Unregulated Encapsulated

SUS01 Series: Single Output

MW MEAN WELL

- 1000VDC isolation
- Input filter: capacitor type
- Protection: short-circuit
- No external components needed
- 100% burn-in test
- One-year warranty
- Very high MTBF
- Working temperature: -15 to +60°C @ full load
  -25 to +71°C @ 80% load

Shown below in buff color, our lowest price Mean Well DC-to-DC converter is the unregulated 1.0-watt SUS01. It requires no external components and features a capacitor-type input filter for minimum noise. SMD technology is employed for superior reliability and small size. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 100MΩ and capacitance of 80pF maximum. Adequate for many applications, line regulation is ±1.2% and load regulation from 20% to 100% of full load is ±8%. The dual-in-line non-conductive plastic package makes the SUS01 easy to design in. The working temperature is –15°C to +60C with no derating and –25°C to +71°C at 80% load.

VALUE PRICED. HIGH QUALITY

SUS01 Dimensions

3 & 5-Watt Regulated Encapsulated

DCW03, SCW03, DLW05 & SLW05 Series: Single & Dual Outputs

MW MEAN WELL   **VALUE PRICED. HIGH QUALITY**

- 1000VDC isolation
- No external components needed
- 2:1 wide input range
- 100% burn-in test
- Free-air convection cooling
- Protection: short-circuit & overload
- Working temperature: -15 to +60°C @ full load;
  -25 to +71°C @ 80% load

- Input filter: Pi network
- Industry standard package
- Shielded metal case
- One-year warranty
- Very high MTBF

New
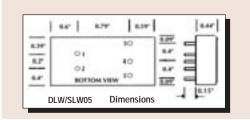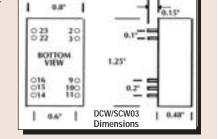
Highlighted below in tan, these popular regulated DC-to-DC converters performance features include a wide input voltage range of 2:1 and the use of a pi-network input filter for low noise operation. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 100MΩ.

The Mean Well SCW03 and DCW03 families include single and dual-output 3-watt configurations packaged in five-sided shielded metal cases. The industry-standard package size supports full power with free-air convection.

Offering both single and dual outputs, the Mean Well SLW05 & DLW05 5-watt series are very popular because of their low-cost, reliability, and industry-standard package comprised of a six-sided shielded metal case. Continuous short-circuit protection and overload protection, both with auto-recovery, are standard features.

DLW/SLW05 Dimensions

DCW/SCW03 Dimensions

Other Versions Available: Call 800-831-4242

Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature °C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Jameco Part Number	Price 1	10	25	100
Mean Well	SRS-0505	4.5-5.5V	+5V@100mA	0.5W	see diagram	4.63	8	100		1.0	1.0	500k	1,000	-15 to +60	62	600,000	0.01	213225CP	$9.95	$8.95	$8.09	$7.28
Mean Well	SPR01L-05	4.5-5.5V	+5V@200mA	1.0W	see diagram	17.86	4	100		1.0	1.0	100k	1,000	-15 to +60	57	800,000	0.01	213313CP	9.95	8.95	8.09	7.28
Mean Well	SPR01L-12	4.5-5.5V	+12V@84mA	1.0W	see diagram	17.86	4	100		1.0	1.0	100k	1,000	-15 to +60	61	800,000	0.01	216830CP	9.95	8.95	8.09	7.28
Mean Well	SPR01L-15	4.5-5.5V	+15V@67mA	1.0W	see diagram	17.86	4	100		1.0	1.0	100k	1,000	-15 to +60	62	800,000	0.01	216848CP	9.95	8.95	8.09	7.28
Mean Well	SPR01N-05	21.6-26.4V	+5V@200mA	1.0W	see diagram	17.86	4	100		1.0	1.0	100k	1,000	-15 to +60	62	800,000	0.01	213250CP	9.95	8.95	8.09	7.28
Mean Well	SUS01L-05	4.5-5.5V	+5V@200mA	1.0W	see diagram	9.26	8	100		8.0	1.2	100k	1,000	-15 to +60	73	700,000	0.01	213241CP	7.95	7.29	6.49	5.85
Mean Well	SCW03A-05	9-18V	+5V@600mA	3.0W	see diagram	2.08	10	100		1.0	0.5	25k	1,000	-15 to +60	74	350,000	0.03	213268CP	15.49	13.95	12.59	11.29
Mean Well	SCW03B-05	18-36V	+5V@600mA	3.0W	see diagram	6.25	10	100		1.0	0.5	25k	1,000	-15 to +60	75	350,000	0.03	213217CP	15.49	13.95	12.59	11.39
Mean Well	DCW03A-05	9-18V	+5V@300mA; -5V@300mA	3.0W	see diagram	7.14	10	100		1.0	0.5	25k	1,000	-15 to +60	74	350,000	0.03	155918CP	20.95	18.89	16.99	15.29
Mean Well	DCW03A-12	9-18V	+12V@125mA; -12V@125mA	3.0W	see diagram	5.77	10	100		1.0	0.5	25k	1,000	-15 to +60	80	350,000	0.03	161701CP	20.95	18.89	16.99	15.29
Mean Well	SLW05L-12	4.5-9V	+12V@417mA	5.0W	see diagram	6.25	5	100		0.2	0.5	50k	1,000	-15 to +60	70	—	0.07	220388CP	24.95	22.59	20.29	18.25
Mean Well	SLW05L-15	4.5-9V	+15V@333mA	5.0W	see diagram	6.25	5	100		0.2	0.5	50k	1,000	-15 to +60	72	—	0.07	220370CP	24.95	22.59	20.29	18.25
Mean Well	SLW05A-033	9-18V	+3.3V@1500mA	5.0W	see diagram	6.25	5	100		0.2	0.5	50k	1,000	-15 to +60	70	—	0.07	220353CP	24.95	22.59	20.29	18.25
Mean Well	SLW05A-05	9-18V	+5V@1000mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	75	500,000	0.07	216928CP	24.95	22.49	20.25	18.25
Mean Well	SLW05A-12	9-18V	+12V@417mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	80	500,000	0.07	216899CP	24.95	22.49	20.25	18.25
Mean Well	SLW05A-15	9-18V	+15V@333mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	81	500,000	0.07	216881CP	24.95	22.49	20.25	18.25
Mean Well	SLW05B-033	18-36V	+3.3V@1500mA	5.0W	see diagram	6.25	5	100		0.2	0.5	50k	1,000	-15 to +60	71	—	0.07	220361CP	24.95	22.59	20.29	18.25
Mean Well	SLW05B-05	18-36V	+5V@1000mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	77	500,000	0.07	216936CP	24.95	22.49	20.25	18.25
Mean Well	SLW05B-12	18-36V	+12V@417mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	82	500,000	0.07	216910CP	24.95	22.49	20.25	18.25
Mean Well	SLW05B-15	18-36V	+15V@333mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	83	500,000	0.07	216872CP	24.95	22.49	20.25	18.25
Mean Well	SLW05C-05	36-72V	+5V@1000mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	77	500,000	0.07	213233CP	24.95	22.59	20.29	18.29
Mean Well	SLW05C-12	36-72V	+12V@417mA	5.0W	see diagram	6.25	5	100		1.0	0.2	50k	1,000	-15 to +60	83	500,000	0.07	216901CP	24.95	22.49	20.25	18.25
Mean Well	DLW05A-12	9-18V	+12V@208mA; -12V@208mA	5.0W	see diagram	6.25	5	100		2.0	0.2	50k	1,000	-15 to +60	80	500,000	0.07	216856CP	28.95	26.09	23.15	20.85
Mean Well	DLW05B-12	18-36V	+12V@208mA; -12V@208mA	5.0W	see diagram	6.25	5	100		2.0	0.2	50k	1,000	-15 to +60	82	500,000	0.07	216864CP	28.95	26.09	23.15	20.85

Encapsulated

Limited Supply – Special Offers – 90-Day Warranty

SALE

Manufacturer	Manufacturer Product Number	Input Range	Output	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature °C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Jameco Part Number	Price 1	10	25	100
Trimag	TDB4W-4805S	36-72V	+5V@500mA	3.0W	1.2x0.8x0.5	6.25	12	50		1.0	1.0	25k	500	-25 to +70	70	400,000	0.03	206076CP	$9.95	$8.99	$8.09	$7.25
Universal Microelectronics	UM1014	36-72V	+5V@250mA; -5V@250mA	3.0W	1.2x0.8x0.4	7.81	14	100		0.5	0.2	200k	1,000	-25 to +71	77	—	0.03	206092CP	9.95	8.99	8.09	7.25

POWER

10-Watt Open Frame
CXA10 Series: Single Output

ARTESYN TECHNOLOGIES

- 1500VDC isolation
- Industry standard footprint
- Protection: short-circuit & overload
- 100% burn-in test • Two-year warranty
- Very high MTBF • Remote ON/OFF
- Low ripple & noise • 4:1 input voltage range
- Working temperature: -40 to +100°C (see derating curve)

Detailed below in blue, the CXA10 series has a wide 4:1 input voltage range of 18 to 75 VDC. The CXA10 has been designed as a competitive open-frame alternative for the communications market, featuring an industry-standard footprint of 2" x 1" x 0.4". Other important product features include over-voltage protection, short-circuit protection and remote ON/OFF. Planar magnetics are used in the design to improve reliability and reduce the profile. The series has full international safety approval to EN60950 and UL1950, reducing system compliance costs. The basic insulation system from input to output makes it suitable for a wide variety of applications.

CXA10 Dimensions

HIGH QUALITY, U.S. BRAND

UNDERSTANDING CONVERTERS #2

OTP: OVER-TEMPERATURE PROTECTION A protection system for converters where the converter shuts down if the ambient temperature exceeds the converters ratings. OTP is intended to save the converter and any downstream equipment in the event of a catastrophic failure of a fan or such. OTP usually measures the hottest item on board the converter rather than ambient temperature.

OUTPUT DERATING

15-Watt Open Frame
CXE15 Series: Single Output

ARTESYN TECHNOLOGIES

- 1500VDC isolation
- Industry standard footprint
- Protection: over-voltage & over-current
- 100% burn-in test
- Two-year warranty
- Remote ON/OFF
- Low ripple & noise
- 87% efficiency at 5V
- No minimum load
- Output trim
- Planar magnetics technology
- Working temperature: -40° to +65°C

Highlighted below in buff color, the CXE15 is a high-efficiency, open-frame, isolated 15-watt DC-to-DC converter series in an industry standard footprint. They feature an input voltage range of 33 to 75VDC and are available in output voltages of 1.8V, 2.5V, 3.3V, and 5V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. With full international safety approval including EN60950 and UL1950, the CXE15 reduces compliance cost and time to market.
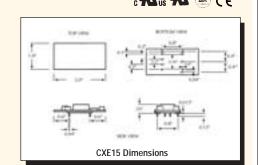
HIGH QUALITY, U.S. BRAND

CXE15 Dimensions

10-Watt Encapsulated
SKE10 & DKE10 Series: Single & Dual Outputs

VALUE PRICED, HIGH QUALITY

- 1000VDC isolation
- Input filter: Pi-network
- Protection: short-circuit & overload
- 100% burn-in test
- One-year warranty
- Very high MTBF
- Free-air convection cooling • Shielded metal case
- Industry standard package • 2:1 wide input range
- Working temperature: -15 to +60°C @ full load; -25 to +71°C @ 80% load
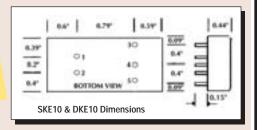
Highlighted below in tan, the Mean Well SKE10 & DKE10 families of regulated DC-to-DC converters include popular single and dual-output 10-watt configurations packaged in six-sided shielded metal cases. The industry-standard package size supports full power with free-air convection. Performance features include a wide input voltage range of 2:1 and the use of a pi-network input filter for low noise operation. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 100MΩ. Line regulation is ±0.3% maximum, and load regulation for a load change of 20% to full load is ±1% for single output and ±2% for dual output. The working temperature is –15°C to +60°C with no derating and –25°C to +71°C at 80% load. Protection includes short-circuit and overload.

UNDERSTANDING CONVERTERS #3

DPA: DISTRIBUTED POWER ARCHITECTURE. This is a power distribution system where the conversion to lower voltages is done locally near the load. An interim DC voltage is provided from the AC mains by a Front-End. This is then distributed to smaller DC-DC converters spread throughout the system where they are required.

SKE10 & DKE10 Dimensions

Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature °C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	25	100
Artesyn	CXA10-48S3V3	18-75V	+3.3V@2400mA	7.9W	see diagram	9.9	6	30		0.1	0.2	400k	1,500	-40 to +70	78	456,000	0.03	UL/CUL/CSA/VDE/CE	219037CP	$41.45	$39.39	$37.39	$35.59
Artesyn	CXA10-48S05	18-75V	+5.0V@2000mA	10.0W	see diagram	12.5	6	30		0.1	0.2	400k	1,500	-40 to +70	81	456,000	0.03	UL/CUL/CSA/VDE/CE	219045CP	41.45	39.39	37.39	35.59
Artesyn	CXE15-48S1V8	33-75V	+1.8V@6000mA	10.8W	see diagram	13.5	6	40		0.3	2.0	265k	1,500	-40 to +70	83	600,000	0.03	UL/CUL/TUV/CE	219070CP	44.85	42.95	40.49	38.49
Artesyn	CXE15-48S2V5	33-75V	+2.5V@6000mA	15.0W	see diagram	18.8	6	40	←→	0.3	1.5	265k	1,500	-40 to +70	85	600,000	0.03	UL/CUL/TUV/CE	219088CP	44.85	42.95	40.49	38.49
Artesyn	CXE15-48S3V3	33-75V	+3.3V@4500mA	15.0W	see diagram	18.8	6	70		0.1	0.5	265k	1,500	-40 to +65	86	600,000	0.03	UL/CUL/TUV/CE	219053CP	44.85	42.95	40.49	38.49
Artesyn	CXE15-48S05V	33-75V	+5V@3000mA	15.0W	see diagram	18.8	6	70		0.1	0.5	265k	1,500	-40 to +65	87	600,000	0.03	UL/CUL/TUV/CE	219061CP	44.85	42.95	40.49	38.49
Mean Well	SKE10A-05	9-18V	+5V@2000mA	10.0W	see diagram	12.5	5	50		0.3	1.0	300k	500	-15 to +60	81	—	0.07	—	216961CP	33.95	30.55	26.95	24.55
Mean Well	SKE10A-12	9-18V	+12V@840mA	10.0W	see diagram	12.5	5	60		0.3	1.0	300k	500	-15 to +60	81	—	0.07	—	217007CP	33.95	30.55	26.95	24.55
Mean Well	SKE10A-15	9-18V	+15V@666mA	10.0W	see diagram	12.5	5	60		0.3	1.0	300k	500	-15 to +60	81	—	0.07	—	216979CP	33.95	30.55	26.95	24.55
Mean Well	SKE10B-033	18-36V	+3.3V@2400mA	8.0W	see diagram	10.0	5	50		0.3	0.5	200k	1,000	-15 to +60	76	—	0.07	—	220337CP	33.95	30.55	26.95	24.55
Mean Well	SKE10B-05	18-36V	+5V@2000mA	10.0W	see diagram	12.5	5	50		0.3	0.5	250k	1,000	-15 to +60	79	—	0.07	—	216952CP	33.95	30.55	26.95	24.55
Mean Well	SKE10B-12	18-36V	+12V@840mA	10.0W	see diagram	12.5	5	60		0.3	0.5	250k	1,000	-15 to +60	83	—	0.07	—	217023CP	33.95	30.55	26.95	24.55
Mean Well	SKE10B-15	18-36V	+15V@666mA	10.0W	see diagram	12.5	5	60	←→	0.3	0.5	250k	1,000	-15 to +60	83	—	0.07	—	216995CP	33.95	30.55	26.95	24.55
Mean Well	SKE10C-033	36-72V	+3.3V@2400mA	8.0W	see diagram	10.0	5	50		0.3	0.5	200k	1,000	-15 to +60	76	—	0.07	—	220345CP	33.95	30.55	26.95	24.55
Mean Well	SKE10C-05	36-72V	+5V@2000mA	10.0W	see diagram	12.5	5	50		0.3	1.0	250k	1,000	-15 to +60	80	—	0.07	—	216944CP	33.95	30.55	26.95	24.55
Mean Well	SKE10C-12	36-72V	+12V@840mA	10.0W	see diagram	12.5	5	60		0.3	1.0	250k	1,000	-15 to +60	82	—	0.07	—	217015CP	33.95	30.55	26.95	24.55
Mean Well	SKE10C-15	36-72V	+15V@666mA	10.0W	see diagram	12.5	5	60		0.3	1.0	250k	1,000	-15 to +60	82	—	0.07	—	216987CP	33.95	30.55	26.95	24.55
Mean Well	DKE10A-05	9-18V	+5V@1000mA; -5V@1000mA	10.0W	see diagram	12.5	5	50		0.3	0.5	250k	1,000	-15 to +60	78	—	0.07	—	217031CP	34.95	31.45	27.95	25.45
Mean Well	DKE10A-12	9-18V	+12V@420mA; -12V@420mA	10.0W	see diagram	12.5	5	60		0.3	0.5	250k	1,000	-15 to +60	80	—	0.07	—	217091CP	34.95	31.45	27.95	25.45
Mean Well	DKE10A-15	9-18V	+15V@333mA; -15V@333mA	10.0W	see diagram	12.5	5	60		0.3	0.5	250k	1,000	-15 to +60	82	—	0.07	—	217111CP	34.95	31.45	27.95	25.45
Mean Well	DKE10B-05	18-36V	+5V@1000mA; -5V@1000mA	10.0W	see diagram	12.5	5	50		0.3	0.5	250k	1,000	-15 to +60	81	—	0.07	—	217058CP	34.95	31.45	27.95	25.45
Mean Well	DKE10B-12	18-36V	+12V@420mA; -12V@420mA	10.0W	see diagram	12.5	5	60		0.3	0.5	250k	1,000	-15 to +60	80	—	0.07	—	217082CP	34.95	31.45	27.95	25.45
Mean Well	DKE10B-15	18-36V	+15V@333mA; -15V@333mA	10.0W	see diagram	12.5	5	60	←→	0.3	0.5	250k	1,000	-15 to +60	80	—	0.07	—	217074CP	34.95	31.45	27.95	25.45
Mean Well	DKE10C-05	36-72V	+5V@1000mA; -5V@1000mA	10.0W	see diagram	12.5	5	50		0.3	0.5	250k	1,000	-15 to +60	82	—	0.07	—	217040CP	34.95	31.45	27.95	25.45
Mean Well	DKE10C-12	36-72V	+12V@420mA; -12V@420mA	10.0W	see diagram	12.5	5	60		0.3	0.5	250k	1,000	-15 to +60	83	—	0.07	—	217103CP	34.95	31.45	27.95	25.45
Mean Well	DKE10C-15	36-72V	+15V@333mA; -15V@333mA	10.0W	see diagram	12.5	5	60		0.3	0.5	250k	1,000	-15 to +60	84	—	0.07	—	217066CP	34.95	31.45	27.95	25.45

Other Versions Available: Call 800-831-4242

Limited Supply – Special Offers – 90-Day Warranty

Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature °C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	25	100
Power-One	DFC10E48S12	36-72V	+12V@900mA	10.0W	2.0x1.0x0.4	12.5	4	60	←→	0.2	0.2	220k	700	-40 to +90	83	800,000	0.06	—	205954CP	$14.95	$13.49	$12.15	$10.99

POWER

20-Watt Open Frame

CXA20 Series: Single Output

ARTESYN
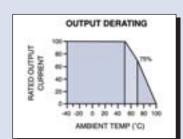
- 1500VDC isolation
- Industry standard footprint
- 100% burn-in test
- Two-year warranty
- Remote ON/OFF
- 4:1 input voltage range
- No minimum load
- Output trim
- Planar magnetics technology
- Protection: over-voltage, over-temperature & short-circuit
- Working temperature: -40˚ to +100˚C (see derating curve)
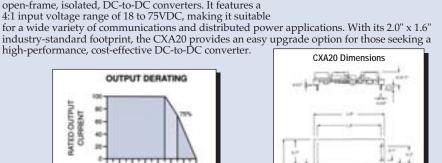
Highlighted below in blue, the CXA20 series is 20-watt, open-frame, isolated, DC-to-DC converters. It features a 4:1 input voltage range of 18 to 75VDC, making it suitable for a wide variety of communications and distributed power applications. With its 2.0" x 1.6" industry-standard footprint, the CXA20 provides an easy upgrade option for those seeking a high-performance, cost-effective DC-to-DC converter.

CXA20 Dimensions

OUTPUT DERATING

15-Watt Encapsulated

SKE15 & DKE15 Series: Single & Dual Outputs
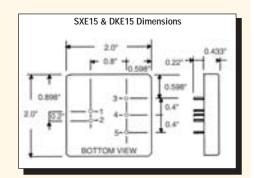
- 1000VDC isolation
- Industry standard package
- Protection: short-circuit & overload
- 100% burn-in test
- One-year warranty
- Shielded metal case
- 2:1 wide input range
- Input filter: Pi-network
- Free-air convection cooling
- Working temperature:
  -15˚ to +60˚C @ full load;
  -25˚ to +71˚C @ 80% load

VALUE PRICED, HIGH QUALITY

Highlighted below in buff color, available in both single and dual outputs, the Mean Well SKE15 & DKE15 series are very popular regulated 15-watt DC-to-DC converters because of their low-cost, reliability, and industry-standard package comprised of a six-sided, shielded metal case. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 100MΩ. Continuous short-circuit protection and overload protection, both with auto-recovery, are standard features. The input voltage range is a wide 2:1 and electrical noise is minimized with a pi-network input filter.

SXE15 & DKE15 Dimensions
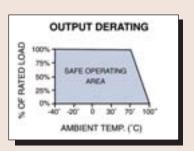
20-Watt Encapsulated
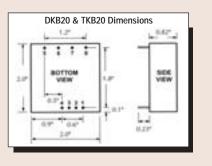
DKB20 & TKB20 Series: Dual & Triple Outputs

- 1000VDC isolation
- Protection: short-circuit & overload
- 100% burn-in test
- Shielded metal case
- Remote ON/OFF
- Free-air convection cooling
- Working temperature: -40˚ to +71˚C
- 0.2% regulation
- One-year warranty
- Input filter: Pi network
- Output trim
- Industry standard package

Highlighted below in tan, featuring extraordinary line and load regulation of ±0.2%, the Mean Well DKB20 & TKB20 families of regulated DC-to-DC converters are superior for applications where the output voltage must stay within tight limits during extreme operating conditions. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 1000MΩ. For ease of use, the DKB20 & TKB20 units require no external components and provide both voltage trim and remote ON/OFF capability.

VALUE PRICED, HIGH QUALITY

DKB20 & TKB20 Dimensions

OUTPUT DERATING

Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature ˚C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	25	100
Artesyn	CXA20-48S3V3	18-75V	+3.3V@6000mA	19.8W	see diagram	15.5	8	75		0.1	0.2	400k	1,500	-40 to +60	80	400,000	0.06	UL/CUL/CSA/VDE/CE	219109CP	$59.25	$50.65	$47.65	$45.25
Artesyn	CXA20-48S05	18-75V	+5V@4000mA	20.0W	see diagram	15.6	8	75		0.1	0.1	400k	1,500	-40 to +60	83	400,000	0.06	UL/CUL/CSA/VDE/CE	219096CP	59.25	50.65	47.65	45.25
Mean Well	SKE15A-05	9-18V	+5V@3000mA	15.0W	see diagram	9.4	5	50		0.3	0.5	150k	1,000	-15 to +60	79	—	0.15	—	155715CP	34.95	31.49	28.15	25.35
Mean Well	SKE15A-12	9-18V	+12V@1250mA	15.0W	see diagram	9.4	5	60		0.3	0.5	150k	1,000	-15 to +60	80	—	0.15	—	155707CP	34.95	31.19	28.15	25.35
Mean Well	SKE15A-24	9-18V	+24V@625mA	15.0W	see diagram	9.4	5	80		0.3	0.5	150k	1,000	-15 to +60	82	—	0.15	—	155694CP	34.95	31.49	28.15	25.35
Mean Well	SKE15B-12	18-36V	+12V@1250mA	15.0W	see diagram	9.4	5	60		0.3	0.5	150k	1,000	-15 to +60	82	—	0.15	—	213284CP	34.95	31.49	28.15	25.35
Mean Well	SKE15B-05	18-36V	+5V@3000mA	15.0W	see diagram	9.4	5	50		0.3	0.5	150k	1,000	-15 to +60	79	—	0.15	—	213276CP	34.95	31.49	28.15	25.35
Mean Well	SKE15C-05	36-72V	+5V@3000mA	15.0W	see diagram	9.4	5	50		0.3	0.5	150k	1,000	-15 to +60	80	—	0.15	—	217138CP	34.95	31.49	28.15	25.35
Mean Well	SKE15C-12	36-72V	+12V@1250mA	15.0W	see diagram	9.4	5	60		0.3	0.5	150k	1,000	-15 to +60	82	—	0.15	—	217120CP	34.95	31.49	28.15	25.35
Mean Well	DKE15A-05	9-18V	+5V@1500mA; -5V@1500mA	15.0W	see diagram	9.4	5	50		0.3	0.5	150k	1,000	-15 to +60	81	—	0.15	—	161710CP	35.95	32.39	29.15	26.25
Mean Well	DKE15A-12	9-18V	+12V@625mA; -12V@625mA	15.0W	see diagram	9.4	5	60		0.3	0.5	150k	1,000	-15 to +60	82	—	0.15	—	161728CP	35.95	32.39	29.15	26.25
Mean Well	DKE15A-24	9-18V	+24V@313mA; -24V@313mA	15.0W	see diagram	9.4	5	80		0.3	0.5	150k	1,000	-15 to +60	82	—	0.15	—	213292CP	35.95	32.39	29.15	26.25
Mean Well	DKE15B-15	18-36V	+15V@500mA; -15V@500mA	15.0W	see diagram	9.4	5	60		0.3	0.5	150k	1,000	-15 to +60	83	—	0.15	—	217162CP	35.95	32.39	29.15	26.25
Mean Well	DKE15C-15	36-72V	+15V@500mA; -15V@500mA	15.0W	see diagram	9.4	5	60		0.3	0.5	150k	1,000	-15 to +60	82	—	0.15	—	217154CP	33.95	30.59	26.95	24.59
Mean Well	DKB20A-05	9-18V	+5V@2000mA; -5V@2000mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	80	700,000	0.25	—	217630CP	52.25	49.65	47.15	44.79
Mean Well	DKB20A-12	9-18V	+12V@833mA; -12V@833mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217584CP	52.25	49.65	47.15	44.79
Mean Well	DKB20A-15	9-18V	+15V@667mA; -15V@667mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217621CP	52.25	49.65	47.15	44.79
Mean Well	DKB20B-12	18-36V	+12V@833mA; -12V@833mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	85	700,000	0.25	—	217592CP	52.25	49.65	47.15	44.79
Mean Well	DKB20B-15	18-36V	+15V@667mA; -15V@667mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	85	700,000	0.25	—	217605CP	52.25	49.65	47.15	44.79
Mean Well	DKB20C-12	36-72V	+12V@833mA; -12V@833mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217576CP	52.25	49.65	47.15	44.79
Mean Well	DKB20C-15	36-72V	+15V@667mA; -15V@667mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217613CP	52.25	49.65	47.15	44.79
Mean Well	TKB20A-B	9-18V	+5V@2500mA; +12V@310mA; -12V@310mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	80	700,000	0.25	—	217656CP	62.95	56.69	50.95	45.95
Mean Well	TKB20B-B	18-36V	+5V@2500mA; +12V@310mA; -12V@310mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217664CP	62.95	56.69	50.95	45.95
Mean Well	TKB20B-C	18-36V	+5V@2500mA; +15V@250mA; -15V@250mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217672CP	62.95	56.69	50.95	45.95
Mean Well	TKB20C-B	36-72V	+5V@2500mA; +12V@310mA; -12V@310mA	20.0W	see diagram	6.3	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	—	217648CP	62.95	56.69	50.95	45.95

Other Versions Available: Call 800-831-4242

Limited Supply – Special Offers – 90-Day Warranty

Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature ˚C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	Price 1	10	25	100
Astec	AA9090A	0-20V	+5.1V@3750mA; +12.6V@100mA; -26V@40mA	21.0W	3.6x1.6x0.8	4.6	27	50/100/200		2.0	5.0	40k	—	0 to +50	70	—	—	—	109276CP	$6.95	$5.59	$4.19	$2.95

POWER
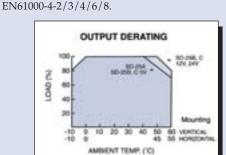
25-Watt Enclosed
SD25 Series: Single Output
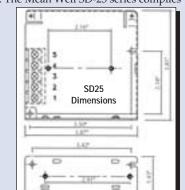
- 1000VDC isolation
- Input filter: Pi-network
- Protection: short-circuit, overload & over-voltage
- Free-air convection cooling
- 2:1 wide input range
- Industry standard package
- Shielded metal case   • 105°C output capacitor
- 100% burn-in test   • One-year warranty
- Very high MTBF
- Working temperature: -10° to +60°C (see derating curve)

VALUE PRICED, HIGH QUALITY

Highlighted below in blue and well known for its reliability and low cost, the Mean Well SD-25 family of enclosed DC-to-DC converters offers wide 2:1 input voltage ranges. The physical ruggedness is complemented by the many electrical protections; short-circuit, overload with auto-recovery, and over-voltage to 165% of rated output. The input-to-output isolation is 500VDC and the isolation resistance is 100MΩ at 500VDC. The highly-efficient, low-temperature design provides full power from 0°C to 40°C, with derating to –10°C and +60°C (see derating curve). The line and load regulation are both ±0.5% maximum. The Mean Well SD-25 series complies with EMC standards EN55022 class B and EN61000-4-2/3/4/6/8.

OUTPUT DERATING
SD25 Dimensions

30-Watt Encapsulated
DKA30 & TKA30 Series: Dual & Triple Output

- ±0.2% regulation
- 1000VDC isolation
- Input filter: Pi-network
- Protection: short-circuit & overload
- Free-air convection cooling
- 2:1 wide input range
- Industry standard package
- Shielded metal case   • Remote ON/OFF
- 100% burn-in test   • One-year warranty
- Very high MTBF   • Output trim
- Working temperature: -40° to +71°C

VALUE PRICED, HIGH QUALITY

New
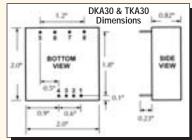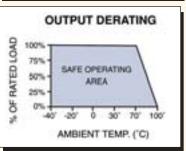
Detailed below in buff color, the Mean Well DKA30 & TKA30 families of regulated 30-watt DC-to-DC converters include popular dual and triple-output configurations packaged in six-sided, shielded metal cases. Line and load regulation are both ±0.2%. Load regulation applies for a load change of 10% to full load for both dual and triple-outputs. The industry-standard package supports full power with free-air convection over the ambient temperature range of –40°C to 71°C. Performance features include a wide input voltage range of 2:1 and the use of a pi-network input filter for low noise operation. The input-to-output isolation is an impressive 1000VDC, with I/O isolation resistance of 1000MΩ. Short-circuit and over-voltage protection is included. For ease of use, the DKA30 & TKA30 units require no external components and provide both voltage trim and remote ON/OFF capability.

DKA30 & TKA30 Dimensions
BOTTOM VIEW   SIDE VIEW

New

OUTPUT DERATING
SAFE OPERATING AREA
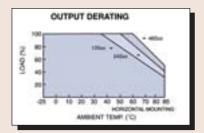
30-Watt Regulated Encapsulated
SDM30 Series: Single Output
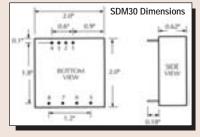
- 1000VDC isolation
- Input filter: Pi-network
- Protection: short-circuit, overload & over-voltage
- Free-air convection cooling
- Industry standard package
- 2:1 wide input range
- Shielded metal case
- Remote ON/OFF
- 100% burn-in test   • One-year warranty
- Very high MTBF   • Output trim
- Working temperature: -25° to +85°C

VALUE PRICED, HIGH QUALITY

Shown below in tan, with efficiency as high as 85%, this impressive family of 30-watt encapsulated DC-to-DC converters provides full power output with free-air convection cooling. The compact size of 2.0"x2.0"x0.63" and the 6-sided shielded metal case lend to its easy adaptability to numerous types of applications. Input voltage ranges are a full 2:1. The line and load regulation are both a solid ±1%. Protection includes short-circuit, overload to 105% with auto-recovery, and over-voltage to 150% of rated output. The isolation voltage is 1000VDC and the resistance is 100MΩ at 500VDC. The SDM30 series features ±10% trimming output and remote ON/OFF control. They completely comply with EN55022 class B, FCC part 15J and EN60950 safety and EMI requirements.
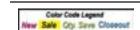
OUTPUT DERATING
SDM30 Dimensions

Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature °C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Jameco Part Number	Price 1	10	25	100
Mean Well	SD-25A-5	9-18V	+5V@5000mA	25.0W	see diagram	1.2	5	100		0.5	0.5	—	500	-10 to +60	71	—	0.80	175661CP	$39.95	$35.95	$32.95	$29.65
Mean Well	SD-25A-12	9-18V	+12V@2100mA	25.2W	see diagram	1.2	5	120		0.3	0.3	—	500	-10 to +60	72	—	0.80	175804CP	39.95	35.95	32.95	29.65
Mean Well	SD-25A-24	9-18V	+24V@1100mA	26.4W	see diagram	1.2	5	150		0.2	0.2	—	500	-10 to +60	75	—	0.80	175812CP	39.95	35.95	32.95	29.65
Mean Well	SD-25B-5	19-36V	+5V@5000mA	25.0W	see diagram	1.2	5	100	↔	0.5	0.5	—	500	-10 to +60	72	—	0.80	212556CP	39.95	35.95	32.95	29.65
Mean Well	SD-25C-5	36-72V	+5V@5000mA	25.0W	see diagram	1.2	5	100		0.5	0.5	—	500	-10 to +60	74	—	0.80	216629CP	38.95	31.95	29.95	26.95
Mean Well	DKA30A-12	9-18V	+12V@1250mA; -12V@1250mA	30.0W	see diagram	9.4	8	100		0.2	0.2	100k	1,000	-40 to +71	80	700,000	0.25	217701CP	64.95	58.45	52.59	47.35
Mean Well	DKA30B-12	18-36V	+12V@1250mA; -12V@1250mA	30.0W	see diagram	9.4	8	100		0.2	0.2	100k	1,000	-40 to +71	85	700,000	0.25	218544CP	64.95	58.45	52.59	47.35
Mean Well	DKA30C-12	36-72V	+12V@1250mA; -12V@1250mA	30.0W	see diagram	9.4	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	217699CP	64.95	58.45	52.59	47.35
Mean Well	TKA30A-B	9-18V	+5V@3500mA; +12V@310mA; -12V@310mA	25.0W	see diagram	7.8	8	100		0.2	0.2	100k	1,000	-40 to +71	80	700,000	0.25	217736CP	69.65	62.65	56.39	50.75
Mean Well	TKA30B-C	18-36V	+5V@3500mA; +15V@250mA; -15V@250mA	25.0W	see diagram	7.8	8	100		0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	217728CP	69.65	62.65	56.39	50.75
Mean Well	TKA30C-B	36-72V	+5V@3500mA; +12V@310mA; -12V@310mA	25.0W	see diagram	7.8	8	100	↔	0.2	0.2	100k	1,000	-40 to +71	82	700,000	0.25	217681CP	69.65	62.65	56.39	50.75
Mean Well	SDM30-12S05	9-18V	+5V@5000mA	25.0W	see diagram	10.4	8	75		1.0	1.0	—	1,000	-25 to +85	77	—	0.22	217200CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-12S12	9-18V	+12V@2100mA	25.2W	see diagram	10.5	8	100		1.0	1.0	—	1,000	-25 to +85	80	—	0.22	217234CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-12S15	9-18V	+15V@1700mA	25.5W	see diagram	10.5	8	100		1.0	1.0	—	1,000	-25 to +85	80	—	0.22	217189CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-24S05	18-36V	+5V@5000mA	25.0W	see diagram	10.4	8	75		1.0	1.0	—	1,000	-25 to +85	79	—	0.22	217218CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-24S12	18-36V	+12V@2500mA	30.0W	see diagram	12.5	8	100		1.0	1.0	—	1,000	-25 to +85	82	—	0.22	217242CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-24S15	18-36V	+15V@2000mA	30.0W	see diagram	12.5	8	100	↔	1.0	1.0	—	1,000	-25 to +85	83	—	0.22	217171CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-48S05	36-72V	+5V@5000mA	25.0W	see diagram	10.4	8	75		1.0	1.0	—	1,000	-25 to +85	80	—	0.22	217226CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-48S12	36-72V	+12V@2500mA	30.0W	see diagram	12.5	8	100		1.0	1.0	—	1,000	-25 to +85	84	—	0.22	217251CP	45.95	41.35	37.25	33.55
Mean Well	SDM30-48S15	36-72V	+15V@2000mA	30.0W	see diagram	12.5	8	100		1.0	1.0	—	1,000	-25 to +85	85	—	0.22	217197CP	45.95	41.35	37.25	33.55

Other Versions Available: Call 800-831-4242

SALE	**Limited Supply – Special Offers – 90-Day Warranty**																					**SALE**
Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature °C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Jameco Part Number	Price 1	10	25	100
Universal Microelectronics	UM1106	9-18V	+5V@3000mA; +12V@450mA; -12V@450mA	25.0W	4.5x2.6x0.8	2.7	8	75	↔	1.0	5.0	—	500	-25 to +71	74	—	0.60	206084CP	$19.95	$17.99	$16.19	$14.55

POWER

POWER
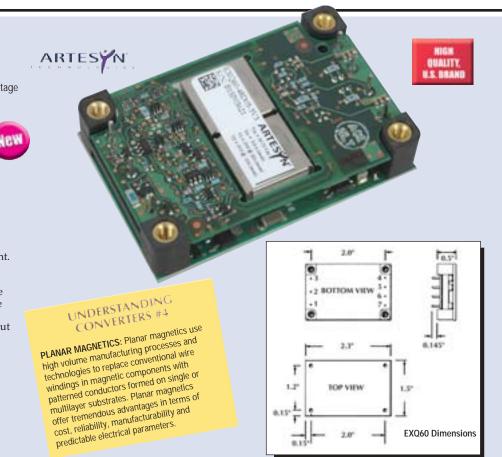
60-Watt Open Frame
EXQ60 Series Dual Outputs

• 1500VDC isolation
• Industry standard footprint
• Protection: short-circuit, over-current & over-voltage
• 100% burn-in test
• Two-year warranty
• Very high MTBF
• Remote ON/OFF
• No minimum load
• 91% efficiency at 5V & 3.3V
• Output trim
• Planar magnetics technology
• Working temperature: -40 to +100˚C

Detailed below in blue, the EXQ60 is a new dual-output, high-efficiency, open-frame, isolated 60-watt DC-to-DC converter series in an industry-standard quarter-brick footprint. The EXQ60 delivers very high output current at low voltages, and excellent useable power density for today's high-end applications. The models offered feature an input voltage range of 33 to 75VDC and are available in output voltages of 5V/3.3V and 3.3V/2.5V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. Typical efficiencies for the models are 91% for the 5V/3.3V and 90% for the 3.3V/2.5V versions. The EXQ60 Series also has a remote ON/OFF capability. Over-current and over-voltage protection features are included as standard. With full international safety approval including EN60950 and UL1950, the EXQ60 reduces compliance cost and time to market.

ARTESYN
TECHNOLOGIES

HIGH QUALITY, U.S. BRAND

New

UNDERSTANDING CONVERTERS #4

PLANAR MAGNETICS: Planar magnetics use high volume manufacturing processes and technologies to replace conventional wire windings in magnetic components with patterned conductors formed on single or multilayer substrates. Planar magnetics offer tremendous advantages in terms of cost, reliability, manufacturability and predictable electrical parameters.

2.0"   0.5"
BOTTOM VIEW
2.3"   0.145"
1.2"   1.5"
TOP VIEW
0.15"
0.15"
2.0"
EXQ60 Dimensions

50, 100 & 150-Watt Enclosed
SD50, SD100 & SD150 Series: Single Output
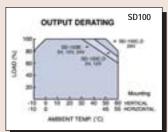
• 1000VDC isolation
• Input filter: Pi-network
• Protection: short-circuit, overload & over-voltage
• 100% burn-in test
• One-year warranty
• Very high MTBF
• Shielded metal case
• Free-air convection cooling
• Industry standard package
• 2:1 wide input range
• 105˚C output capacitor
• Working temperature: -10˚ to +60˚C (see derating curve)

Highlighted below in tan, the Mean Well SD families of enclosed DC-to-DC converters are known for their reliability and low cost. The physical ruggedness is complemented by the many electrical protections; short-circuit, overload with auto-recovery, and over-voltage to 165% of rated output. These converters offer wide 2:1 input voltage ranges of 9-18VDC and 36-72VDC. The input-to-output isolation is 500VDC and the isolation resistance is 100MΩ at 500VDC. The highly-efficient, low-temperature design provides full power from 0˚C to 40˚C, with derating to –10˚C and +60˚C (see derating curve). The line and load regulation are both ±0.5% maximum. The Mean Well SD series complies with EMC standards EN55022 class B and EN61000-4-2/3/4/6/8.
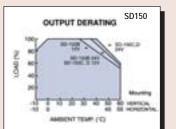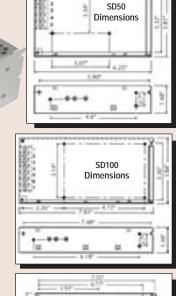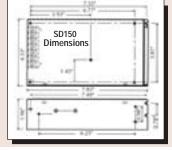
MW
MEAN WELL

VALUE PRICED, HIGH QUALITY

SD50 Dimensions

SD100 Dimensions

SD150 Dimensions

OUTPUT DERATING SD50
OUTPUT DERATING SD100
OUTPUT DERATING SD150

| Open Frame	Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature ˚C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	1	10	25	100	
Open Frame	Artesyn	EXQ60-48D3V3-2V5-R	33-75V	+2.5V@16A; +3.3V@12A	40.0W	see diagram	46.4	7	60		—	—	325k	1,500	-40 to +100	90.5	270,000	0.10	UL/CUL/TUV	218894CP	$134.95	$115.35	$108.59	$103.59	Open Frame
	Artesyn	EXQ60-48D05-3V3-R	33-75V	+3.3V@15A; +5V@12A	60.0W	see diagram	63.8	7	60		—	—	400k	1,500	-40 to +100	91.5	270,000	0.10	UL/CUL/TUV	218907CP	134.95	115.35	108.59	103.59	
Enclosed	Mean Well	SD-50A-5	9-18V	+5V@10A	50.0W	see diagram	1.4	5	100		0.5	0.5	—	1,500	-10 to +60	70	—	1.10	—	212548CP	52.95	47.95	42.95	38.65	Enclosed
	Mean Well	SD-50B-5	19-36V	+5V@10A	50.0W	see diagram	1.4	5	100		0.5	0.5	—	1,500	-10 to +60	73	—	1.10	—	212521CP	52.95	47.95	42.95	38.65	
	Mean Well	SD-50B-12	19-36V	+12V@4.2A	50.4W	see diagram	1.4	5	120		0.3	0.3	—	1,500	-10 to +60	75	—	1.10	—	212530CP	52.95	47.95	42.95	38.65	
	Mean Well	SD-50B-24	19-36V	+24V@2.1A	50.4W	see diagram	1.4	5	150		0.2	0.2	—	1,500	-10 to +60	80	—	1.10	—	212513CP	52.95	47.95	42.95	38.65	
	Mean Well	SD-50C-5	36-72V	+5V@10A	50.0W	see diagram	1.4	5	100		0.5	0.5	—	1,500	-10 to +60	76	—	1.10	—	216602CP	52.95	47.95	42.95	38.65	
	Mean Well	SD-50C-12	36-72V	+12V@4.2A	50.4W	see diagram	1.4	5	120		0.3	0.3	—	1,500	-10 to +60	78	—	1.10	—	212505CP	52.95	47.95	42.95	38.65	
	Mean Well	SD-50C-24	36-72V	+24V@2.1A	50.4W	see diagram	1.4	5	150		0.2	0.2	—	1,500	-10 to +60	83	—	1.10	—	212492CP	52.95	47.95	42.95	38.65	
	Mean Well	SD-100B-5	19-36V	+5V@20A	100.0W	see diagram	2.3	7	100		0.5	0.5	—	1,500	-10 to +60	74	—	1.30	—	212476CP	69.95	62.95	56.95	51.25	
	Mean Well	SD-100B-12	19-36V	+12V@8.5A	102.0W	see diagram	2.3	7	120		0.3	0.3	—	1,500	-10 to +60	75	—	1.30	—	216565CP	68.95	62.95	56.95	51.25	
	Mean Well	SD-100C-5	36-72V	+5V@20A	100.0W	see diagram	2.3	7	100		0.5	0.5	—	1,500	-10 to +60	75	—	1.30	—	212484CP	69.95	62.95	56.95	51.25	
	Mean Well	SD-100C-12	36-72V	+12V@8.5A	102.0W	see diagram	2.3	7	120		0.3	0.3	—	1,500	-10 to +60	77	—	1.30	—	212468CP	69.95	62.95	56.95	51.25	
	Mean Well	SD-150B-12	19-36V	+12V@12.5A	150.0W	see diagram	2.5	7	120		0.5	0.5	—	1,500	-10 to +60	75	—	1.90	—	217269CP	78.95	71.15	64.05	57.65	

Other Versions Available: Call 800-831-4242

SALE   **Limited Supply – Special Offers – 90-Day Warranty**   **Limited Supply – Special Offers – 90-Day Warranty**   SALE

Encapsulated	Manufacturer	Manufacturer Product Number	Input Range	Output Voltage@Current	Power	Size Inches (LxWxH)	Power Density (W/in³)	Pins	Ripple & Noise (mV p-p)		Line Reg. (±%)	Load Reg. (±%)	Switching Frequency (Hz) min.	Isolation Voltage	Temperature ˚C	Efficiency (%)	MTBF (hours)	Weight (lbs.)	Certification	Jameco Part Number	1	10	25	100	
Encapsulated	Shindingen	HGE05024	20-32V	+5V@24A	120.0W	4.5x2.3x0.5	23.2	13	400		0.01	0.05	—	—	-10 to +80	80	—	—	—	206105CP	$29.95	$26.99	$24.29	$21.89	Encapsulated
	Power One	HBD0602GE-A1V1	34-75V	+3.3V@15A; +5V@12A	60.0W	2.3x2.4x0.5	21.7	10	75/100		0.2	0.5	500k	1,500	-40 to +100	79	1,300,000	0.15	UL/CUL/VDE	203561CP	19.95	17.99	16.19	14.59	
	Datel	BCP-5/15-3.3/15-D48	36-75V	+3.3V@15A; +5V@15A	75.0W	2.3x2.4x0.5	27.2	10	50		0.2	0.5	350k	1,500	-40 to +45	88	1,720,000	0.26	UL/VDE	206113CP	24.95	22.49	20.25	18.25	
	Astec	AK60C048L050F20G	36-75V	+5V@20A	100.0W	2.3x2.4x0.5	36.2	9	1		0.2	0.2	—	2,100	-40 to+100	—	—	—	UL/CSA/VDE/CE	188197CP	19.95	17.99	16.19	14.59	
	Power Cube	PD150-048-05-PC	36-76V	+5V@30A	150.0W	2.3x2.4x0.5	54.3	9	50		0.05	0.05	375k	3,000	—	80	1,000,000	0.16	UL/CUL/VDE	206041CP	29.95	26.99	24.29	21.89	
	Power Cube	LPD150-048-15-VC-075	36-76V	+15V@6A	75.0W	2.3x2.4x0.5	27.2	9	150		0.05	0.05	375k	3,000	—	80	1,000,000	0.19	UL/CUL/VDE	206050CP	24.95	22.49	20.25	18.25	
	Power Cube	PD300-300-15-PC	200-300V	+15V@20A	300.0W	4.6x2.4x0.5	54.3	11	150		0.05	0.05	375k	3,000	—	80	1,000,000	0.37	UL/CUL/VDE	206033CP	39.95	35.99	32.39	29.15	
	Lambda	PH300F-280-3	200-400V	+3V@60A	180.0W	5.8x3.4x0.5	18.3	12	100		0.4	0.8	3k	3,000	-20 to +85	73	5,000,000	0.56	UL/CSA/CE	206121CP	32.95	29.69	26.69	24.25	
	Lambda	PH300F-280-12	200-400V	+12V@25A	300.0W	5.8x3.4x0.5	30.4	12	150		0.4	0.8	3k	3,000	-20 to +85	86	5,000,000	0.56	UL/CSA/CE	206130CP	32.95	29.69	26.69	24.25	

13.8VDC Precision Regulated Linear Power Supplies

- Output voltage: 13.8VDC
- Input voltage: 115VAC @ 60Hz
- Fuse protected
- Illuminated rocker switch
- Heavy duty 5'8" 3-prong power cord
- Short-circuit protection
- Output terminals: see page 45 for mating cigarette plugs and page 145 for mating banana terminal plugs

135845CP Banana & Cigarette

136581CP Banana terminal

138667CP Banana terminal (rear)

Part No.	Model No.	Power (W)	Output Current (A)	Output Terminals	Size (L" x W" x H")	Wt. (lbs.)	1	10	25
135845CP	RPS1204	55.2	4	Banana terminals / cigarette plug	6.7 x 5.2 x 3.2	5.5	$29.95	$26.95	$23.95
136581CP	RPS1207†	96.6	7	Banana terminals	8.7 x 5.7 x 3.6	8.5	59.95	53.95	48.95
138667CP	38-381	138.0	10	Banana terminals (rear)	7.0 x 6.6 x 4.3	10.0	69.95	62.95	56.95
138675CP	52-192012	276.0	20	Banana terminals	10.0 x 7.8 x 4.4	15.9	109.95	99.95	89.95

† P/N 136581CP includes overheating protection

POWER-ONE   Linear Power Supplies

- Input voltage: 100/120/220/240VAC @ 47-63Hz
- Input connector: 0.119" solder terminals
- Output connector: solder post
- MTBF rating: greater than 300,000 hrs.
- Ripple and noise: 5.0mVp-p   • Efficiency: 45%
- Over-voltage, over-current, short-circuit protection, remote sensing and 100% burn-in

202884CP: Output voltage: +5VDC @ 1.5A; -5VDC @ 1.5A
- Size: 6.5"L x 4.0"W x 1.6"H   • Weight: 2.6 lbs.

202892CP: Output voltage: +5VDC @ 3.0A; -5VDC @ 3.0A
- Size: 7.0"L x 4.9"W x 2.5"H   • Weight: 4.7 lbs.

Part No.	Product No.	Power	1	10	50
202884CP	HAA5-1.5/0VP-A	15W	$14.95	$11.25	$7.85
202892CP	HBB5-3/0VP-A	30W	17.95	13.49	9.45

ACDC Electronics   45-Watt Linear Power Supply

- Output voltage: 15V @ 3A
- Input voltage: 115VAC @ 50-60Hz
- Input connector: 0.173" solder terminals
- Output connector: solder studs
- Size: 5.6"L x 5.0"W x 3.0"H
- Weight: 4.0 lbs.

Part No.	Product No.	1	10	25
214615CP	ECV15N3	$39.95	$35.95	$32.49

Order Anytime 24x7x365
Phone 1-800-831-4242   Fax 1-800-237-6948

DIN-Rail Switching Power Supplies

- Low cost, high reliability
- International AC input range
- Soft-start circuit, limiting AC surge current
- Short-circuit, overload, over-voltage protected
- Built in EMI filter, low ripple noise
- 100% full load burn in test
- For DIN-Rail terminal blocks see page 124

UL-508   CE

SALE

192698CP   **192680CP**   **212273CP**   **212290CP**

Part No.	Product No.	Power (W)	Output Voltage	Input Voltage (VAC @ Hz/VDC)	Input Current @ Nominal Load	Size (L" x W" x H")	Wt. (lbs.)	1	10	25
212302CP	DR4505	25	5VDC @ 5A	85-264 @ 47-63/120-370	1.5A(115V)/750mA(230V)	3.0 x 2.6 x 3.6	0.9	$39.95	$35.95	$32.95
192698CP	DR4512	42	12VDC @ 3.5A	85-264 @ 47-63/120-370	1.5A(115V)/750mA(230V)	3.0 x 2.6 x 3.6	0.7	49.95	44.95	39.95
192680CP	DR4524	48	24VDC @ 2A	85-264 @ 47-63/120-370	1.5A(115V)/750mA(230V)	3.0 x 2.6 x 3.6	0.7	59.95	53.95	48.95
212273CP	DR12012	120	12VDC @ 10A	88-132/176-264 @ 47-63*	2.8A(115V)/1.7A(230V)	2.6 x 3.9 x 4.9	1.4	92.95	83.65	75.29
212265CP	DR12024	120	24VDC @ 5A	88-132/176-264 @ 47-63*	2.8A(115)/1.7A(230V)	2.6 x 3.9 x 4.9	1.4	92.95	83.65	75.29
212290CP	DR7512	75	12VDC @ 6.3A	85-264 @ 47-63/120-370	2.0A(115V)/1.2A(230V)	3.9 x 2.1 x 4.9	1.2	79.95	71.95	64.95
212281CP	DR7524	75	24VDC @ 3.2A	85-264 @ 47-63/120-370	2.0A(115V)/1.2A(230V)	3.9 x 2.1 x 4.9	1.2	79.95	71.95	64.95

*switch selectable

Din Mounting Rail

DIN rail enables easy installation of components such as fuseable terminal blocks & power supplies configured for DIN mounting.
- Sold in 1 meter (39") length

185965CP

Part No.	Product No.	Description	Material	Type	Length	1	10	100
185965CP	017322005	Prepunched	Zinc bichromate plate steel	PR30	1 meter (39")	$5.95	$5.35	$4.79

Current Sensing Transformers

Class 1 Current Transformer

This series can be applied to test, control, display, and record the running of electrical equipment, and to protect the equipment against damage in the AC circuit.
- Maximum voltage: 660VAC   • Frequency: 50-60Hz
- Size: 3.0"L x 3.2"W x 1.6" thick   • Weight: 1.1 lbs.

Includes: Mounting bracket and hardware

Part No.	Mfr. Cross Ref. No.	Power	Ratio	1	10	100
174887CP	MSQ30	5VA	200A/5A; 5VA	$4.25	$3.82	$3.44

Current Sensing Transformer

- Inductance: 5mH   • Turns: 60
- Sensitivity current (I_{in}): 1A
- Max. current: 300mA
- Freq. range: 10-50 kHz
- Sensitivity voltage (V_{out}): 1V
- Terminating resistor: 50Ω
- Size: 0.8"H x 0.7"W x 0.4"T

Part No.	Mfr. Cross Ref. No.	1	10	100
164718CP	MTC30101	$2.15	$1.95	$1.75
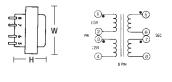
Split-Bobbin Power Transformers

Non-concentrically wound with primaries and secondaries side-by-side providing low capacitive coupling.
• Primary: 115/230VAC, 50-60Hz • PC terminal pin spacing for accurate placement

Part Number	Mfr. Cross Ref. No.	Triad Cross	Input Voltage	VA Cap	Individual Output	Parallel Output	Series Output	Dimensions L"	Dimensions W"	Dimensions H"	Wt. (lbs.)	Pricing 1	Pricing 10	Pricing 100
210956CP	DST2-24-845	—	115/230	1.1	12V @ .045A	12V @ .09A	24VCT @ .045A	1.13	1.13	0.94	0.2	$6.49	$5.85	$5.25
210948CP	DPC20-60B13	—	115/230	1.2	10V @ .06A	10V @ .12A	20VCT @ .06A	1.63	1.25	1.38	0.2	5.79	5.19	4.69
210930CP	PC34-35-B21	—	115	1.2	17V @ .035A	17V @ .07A	34VCT @ .035A	1.38	1.13	1.19	0.2	6.79	6.09	5.49
102517CP	XFR1602SB	FS16150	115/230	2.4	8V @ .15A	8V @ .30A	16VCT @ .15A	1.17	1.38	1.20	0.3	6.95	6.25	5.59
176090CP	SPT41240-120	FS24250	115/230	6.0	12V @ .25A	12V @ .50A	24VCT @ .25A	1.33	1.63	1.59	0.6	6.95	6.25	5.59
102533CP	XFR1205SB	FS12500	115/230	6.3	6.3V @ .50A	6.3V @ 1.0A	12.6VCT @ .50A	1.31	1.62	1.30	0.4	7.29	6.49	5.75
210921CP	14A-10-Z0B21	—	115/230	10.0	10V @ .05A	10V @ 1.0A	20VCT @ 0.5A	1.88	1.56	1.38	0.5	7.49	6.75	6.09
102592CP	XFR2405SB	FS24500	115/230	12.0	12V @ .50A	12V @ 1.0A	24VCT @ .50A	1.58	1.90	1.46	0.7	8.79	7.95	5.49
210964CP	LP40-300-B14	—	115/230	12.0	20V @ 0.3A	20V @ 0.6A	40VCT @ 0.3A	2.50	2.00	1.07	0.7	9.95	8.95	7.95
209015CP	ST-6-48	—	115	19.2	24V @ .40A	24V @ .80A	48VCT @ .40A	1.88	2.25	1.40	0.8	9.95	8.95	7.95
203318CP	P8616	—	115/230	24.0	24V @ .50A	24V @ 1.0A	48VCT @ .50A	1.96	2.25	2.70	1.5	6.95	6.25	5.59
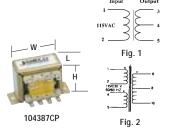
102517CP   **203318CP**

Quick-Connect Power Transformers

• Quick-connect transformers are bobbin wound for smaller size and reduced electrostatic shielding requirements
• Terminals: quick connect, solder   • Input voltage: 115/230VAC, 50-60Hz
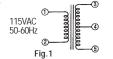
Part Number	Mfr. Cross Ref. No.	Triad Cross	Fig.	Input Voltage	Output Voltage	VA Cap	Size of Connect	Dimensions L"	Dimensions W"	Dimensions H"	Wt. (lbs.)	Pricing 1	Pricing 10	Pricing 100
164110CP	241-3-10	F310	1	115VAC	10VCT @ 0.25A	2.4	0.187"	.59	1.45	2.00	0.2	$4.95	$4.39	$3.69
104387CP	XFR1225Q	FD612	2	115/230VAC	12.6VCT @ 2.5A	31.5	0.187"	1.75	2.33	2.00	1.3	11.95	10.79	9.69
104416CP	XFR3615Q	FD736	2	115/230VAC	36VCT @ 1.5A	54.0	0.187"	1.90	2.70	2.30	1.8	9.95	8.99	8.09
104408CP	XFR1635Q	FD716	2	115/230VAC	16VCT @ 3.5A	56.0	0.187"	2.00	2.70	2.30	1.8	12.95	11.69	10.49
101864CP	XFR2424Q	FD724	2	115/230VAC	24VCT @ 2.4A	57.6	0.187"	1.87	2.70	2.25	1.7	11.95	10.79	9.69

104387CP

Fig. 1

Fig. 2
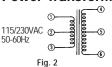
115VAC and 115/230VAC Power Transformers

Power transformers have both single and dual-voltage input and center-tapped outputs. This makes them the perfect choice for power supply design or for use in transformer, rectifier, and filter circuits.
• Primary: 115VAC or 115/230VAC, 50-60Hz

115VAC 50-60Hz **Fig.1**   115/230VAC 50-60Hz **Fig. 2**   **Fig. 3**

29225CP

Part Number	Mfr. Cross Ref. No.	Triad Cross	Primary Color Code			VA Cap	Secondary Voltage	Secondary Color Code			Lead Type	Fig.	Dimensions L"	Dimensions W"	Dimensions H"	Wt. (lbs.)	Pricing 1	Pricing 10	Pricing 100
102162CP	XFR6102	F314X	Black	Yellow*	Red	7.6	6.3VCT @ 1.2A	White	Black*	White	Wire	2	1.56	1.96	1.67	0.8	$8.49	$7.65	$6.89
105523CP	XFR0910	—	Black	White*	Red	9.0	9VCT @ 1A	Blue	Black*	Blue	Wire	2	1.79	1.96	1.66	0.7	6.95	6.25	5.59
105531CP	XFR1810	—	Blue	Red*	Black	18.0	18VCT @ 1A	Yellow	Black*	Yellow	Wire	2	2.32	2.05	1.90	1.2	6.95	4.55	3.55
102111CP	XFR2410	F346X	Black	Yellow*	Red	24.0	24VCT @ 1A	White	Black*	White	Wire	2	2.22	2.33	1.97	1.5	8.95	8.09	7.25
29225CP	XFR122	F44X	Yellow	—	Yellow	25.2	12.6VCT @ 2A	Blue	Red*	Black	Wire	1	2.12	2.33	1.96	1.5	9.95	8.99	8.09
102154CP	XFR1220	F344X	Black	Yellow*	Red	25.2	12.6VCT @ 2A	White	Black*	White	Wire	2	2.35	2.32	1.97	1.5	10.95	9.89	8.89
149956CP	XFR1820	—	Black	Red*	Yellow	36.0	18VCT @ 2A	White	Black*	White	Wire	2	2.26	2.66	2.28	1.8	8.95	7.95	6.95
112512CP	XFR242N	F229X	Black	—	Black	48.0	24VAC @ 2A	White	—	White	Wire	3	1.75	2.75	2.25	1.8	9.79	8.85	7.95
99653CP	XFR242	—	Red	—	Red	49.2	24.6VCT @ 2A	Blue	Yellow*	Blue	Wire	1	2.44	2.70	2.30	2.5	10.95	9.89	8.89
149770CP	XFR1240	F3181U	Black	Red*	Yellow	50.4	12.6VCT @ 4A	White	Black*	White	Wire	2	2.45	2.70	2.24	2.2	12.95	11.69	10.49
102120CP	XFR124	F181U	Black	—	Black	50.4	12.6VCT @ 4A	White	Black*	White	Wire	1	2.53	3.08	2.61	2.7	12.95	11.69	10.49
102103CP	XFR2520	F341X	Black	White*	Red	50.4	25.2VCT @ 2A	Orange	Black*	Orange	Wire	2	2.45	2.67	2.26	2.8	14.95	13.49	12.15
149796CP	XFR2820	F3185U	Black	Red*	Yellow	56.0	28VCT @ 2A	White	Black*	White	Wire	2	2.45	2.70	2.24	2.3	12.95	9.75	6.85

* Center tap

DC-AC Inverters
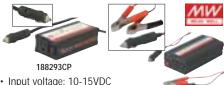
• Input voltage: 12VDC
• Output voltage: 115VAC ±5%
• Input connector: automobile power plug
• Overload and thermal protection
• Weight: 2.0 lbs.
202809CP: 80-Watt
• Output connector: 2-prong receptacle
• Size: 4.1"L x 1.5"W x 1.5"H
202817CP: 140-Watt
• Output connector: 3-prong receptacle
• Size: 5.1"L x 2.5"W x 1.5"H

202809CP
SALE
202817CP

Part No.	Prod. No.	Watts	1	10	25
202809CP	P2	80	$29.79	$27.09	$24.65
202817CP	P4	140	39.95	35.95	32.35

140 & 270-Watt DC-AC Inverters

188293CP

202016CP

• Input voltage: 10-15VDC
• Output voltage: 110VAC @ 60Hz
• Battery low shutdown
• Peak power surge capable   • Weight: 1.3 lbs.
• Overload & high grade thermal protection
188293CP: Size: 5.5"L x 2.6"W x 1.6"H
202016CP: Size: 9.3"L x 4.1"W x 2.2"H
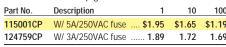
Part No.	Description	1	10	25
188293CP	140W auto plug	$49.95	$39.49	$31.25
202016CP	270W auto/battery clip	64.95	58.49	52.65

Automobile Power Plug & Cord Assembly

SALE

• Screw assembly with strain relief
• Plugs directly into cigarette lighter
• Accepts .25" x 1.25" fuse
124759CP: 3' cord pigtail end

115001CP   **124759CP**

Part No.	Description	1	10	100
115001CP	W/ 5A/250VAC fuse	$1.95	$1.65	$1.19
124759CP	W/ 3A/250VAC fuse	1.89	1.72	1.69

Automobile Power Plug Splitter

• Input: cigarette adapter; non-fused
• Splits out into two 5" female automobile type receptacles

Part No.	Description	1	10	50
123182CP	Power plug splitter	$4.95	$4.49	$3.95

Color Code Legend
New   Sale   Qty. Save

POWER

6VAC/9VAC Dual Output Power Transformer

12VA

- Input voltage: 120VAC
- Output voltage: 6VAC @ 500mA center tap (blue wires); 9VAC @ 1A center tap (yellow wires)
- Size: 2.1"L x 3.2"W x 2.0"H
- Weight: 1.3 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	100
183089CP	YS57H-099FAA	$4.95	$3.99	$2.99

120VAC to 120VAC Isolated Transformer

300VA

- Input voltage: 120VAC @ 60Hz
- Input connector: 5.5' cord with 2-prong plug
- Output voltage: 120VAC @ 2.5A (isolated)
- Size: 4.2"H x 3.2"W x 4.6"D
- Weight: 7.0 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	100
181315CP	ITR300	$39.95	$35.99	$32.39

Wall Transformer Enclosures
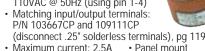
- Enclosures include 3-prong power plug & cable strain relief
- Size: 3.4"H x 2.7"W x 2.3"D
- Material: noryl • Color: black

115051CP

Part No.	Style	1	10	100
115051CP	Non-vented	$2.25	$1.95	$1.69
115043CP	Vented	2.25	1.95	1.69

110VAC Variable AC Transformer

320VA

- Input voltage: 110VAC @ 60Hz (using pin 1-2) 110VAC @ 50Hz (using pin 1-4)
- Matching input/output terminals: P/N 103667CP and 109111CP (disconnect .25" solderless terminals), pg 119
- Maximum current: 2.5A • Panel mount
- Size: 2.8"Dia. x 2.1"H • Shaft length: 0.5"
- Weight: 2.5 lbs. • One-year warranty

Includes: 3 disconnect .25" solderless terminals

Part No.	Description	1	10	50
149323CP	320VA variable	$53.95	$48.59	$43.75

110VAC Variable AC Transformer

550VA

SALE

- Input voltage: 110VAC @ 60Hz
- Output voltage: 0-140VAC
- Rated current: 5A • Panel mount
- Input/output terminals: binding post with 0.188" diameter post
- Size: 4.3"Dia. x 4.0"H
- Weight: 6.8 lbs. • One-year warranty

Part No.	Description	1	10	50
152936CP	550VA variable	$64.95	$58.49	$52.65

Over 99% of our products are in stock!

We'll Send It Today!

Just place your order by 6PM EST for same business day shipment

AEEC 110VAC Variable AC Transformers

- Input voltage: 110VAC @ 60 Hz
- Power: 500 and 2000VA
- Output voltage: 0 to 130VAC
- Output analog voltmeter
- Input conn.: 3-prong plug w/ 5' cord
- Output conn.: 3-prong outlet type
- Lighted on/off power switch

169640CP: • 5A @ 250V fuse
- Size: 8.3"L x 6.5"W x 7.0"H
- Weight: 15.6 lbs.

169640CP

169658CP

169658CP: • 20A @ 250V fuse
- Size: 9.8"L x 8.0"W x 7.0"H • Weight: 26.5 lbs.

Part No.	Description	1	10	50
169640CP	500VA transformer	$74.95	$67.49	$60.75
169658CP	2000VA transformer	124.95	112.49	101.25
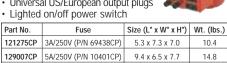
Variable AC Transformers

- Input: 110VAC or 220VAC
- Power: 500-2000VA
- Output: 0-240VAC
- Banana/screw input terminals
- Universal US/European output plugs
- Lighted on/off power switch

121275CP

SALE

Part No.	Fuse	Size (L" x W" x H")	Wt. (lbs.)
121275CP	3A/250V (P/N 69438CP)	5.3 x 7.3 x 7.0	10.4
129007CP	5A/250V (P/N 10401CP)	9.4 x 6.5 x 7.7	14.8
152581CP	10A/250V (P/N 69462CP)	9.0 x 7.0 x 7.7	19.8

Part No.	Description	1	10	50
121275CP	500VA transformer	$79.95	$69.95	$62.95
129007CP	1000VA transformer	149.95	134.99	121.49
152581CP	2000VA transformer	174.95	158.45	139.95

Power Entry Filters and AC Plug Connectors

Fig.1 (146907CP)

Fig. 2 (Solder Terminals)

Fig. 3 (Fast-on Terminals)

Fig. 4 (Cut out)

SALE

Fig. 5 (203140CP)

Fig. 6 (Male)
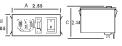
- Frequency: 50/60Hz

For more Power Entry Filters & AC Plugs see page 207.

Fig. 7 (Female)

Fig. 8 (173770CP)

Fig. 9 (117444CP)

Fig. 10 (184903CP)

Fig. 11 (210913CP)

Part Number	Mfr. Cross Ref. No.	Corcom Cross	Description	Fig.	Current (A)	Voltage (VAC)	Terminals	Agency Approvals	Terminal Size	Dimension (inches)				Pricing			
										A	B	C	D	1	10	100	500
146907CP	03DENG3B*		Power entry filter (snap-in)	1	3	250	fast-on	UL/CSA/VDE	.25"	1.25	0.95	2.23	N/A	$4.95	$3.99	$2.99	$2.09
150615CP	03AC1	3EF1	Power entry filter, straight (flanged)	2	3	250	solder	UL/CSA/VDE	.16"	1.89	0.88	2.58	1.58	6.95	6.29	5.65	5.09
42454CP	06AC1	6EF1	Power entry filter, straight (flanged)	2	6	250	solder	UL/CSA/VDE	.16"	1.96	0.88	2.06	1.58	6.95	6.29	5.69	5.09
165016CP	SUP-J15G-E-2		Power entry filter straight (flanged)	2	15	250	solder	UL/CSA/VDE	.16"	1.89	0.88	2.18	1.58	5.95	5.39	4.85	4.35
40601CP	03AE1*	3EF1F	Power entry filter, straight (flanged)	3	3	250	fast-on	UL/CSA/VDE	.25"	1.97	0.90	2.16	1.58	7.49	6.69	5.99	5.39
63132CP	06AE1	6EF1F	Power entry filter, straight (flanged)	3	6	250	fast-on	UL/CSA/VDE	.16"	1.96	0.88	2.06	1.58	7.95	6.95	6.25	5.59
167441CP	10AE1	10EF1F	Power entry filter, straight (flanged)	3	10	250	fast-on	UL/CSA	.25"	1.97	0.89	2.65	1.58	8.95	8.09	7.25	6.55
210913CP	01GEEW3E		Power entry filter, straight (flanged)	11	1	250	wire	UL/CSA/VDE	4.1"	2.05	0.99	1.78	1.58	5.95	5.49	4.95	4.49
212206CP	A6-12S10E		Power entry filter, fused w/ switch (snap-in)	4	6	250	fast-on	UL/CSA/VDE	.25"	2.55	1.05	2.44	N/A	9.95	8.95	7.95	6.95
203140CP	F6-12S10E[1]		Power entry filter, fused w/ switch (snap-in)	5	6	250	fast-on	UL/CSA/VDE	.25"	2.55	1.05	2.82	N/A	11.95	10.95	9.95	8.95
147109CP	42R02		AC power inlet (male) snap-in	6	15	250	fast-on	UL/CSA/VDE	.25"	1.22	0.94	1.13	N/A	.26	.23	.21	.19
16651CP	JR101		AC power inlet (male) flanged	6	15	250	fast-on	UL/CSA/VDE	.187"	1.96	0.89	1.07	1.58	.79	.63	.47	.33
147900CP	P0707*		AC power inlet (male) flanged	6	15	250	solder	UL/CSA/VDE	.16"	1.96	0.89	1.04	1.58	.75	.68	.59	.55
174246CP	SC11		AC power outlet (female) flanged	7	15	250	fast-on	UL/CSA/VDE	.187"	.197	1.17	1.34	1.58	.89	.79	.72	.65
173770CP	6200-21		AC power inlet (male) fused (flanged)	8	10	250	fast-on	UL/CSA/VDE	.136"	1.73	1.34	1.00	1.41	.79	.63	.47	.33
117444CP	0717[2]		AC power inlet (male) fused (snap-in)	9	10	250	fast-on	UL/CSA/VDE	.187"	1.18	1.30	1.21	N/A	1.79	1.45	1.09	.75
184903CP	42R363152IOU		AC power inlet (male) w/ switch (snap-in)	10	15	250	fast-on	UL/CSA/VDE	.25"	1.30	1.58	1.42	N/A	.40	.37	.33	.30

* Manufacturer may vary   [1] High normal mode rejection   [2] Includes spare fuse holder – Fuse type 5mm x 20mm (250V)

POWER

- Molded connectors
- Excellent resistance to jacket abrasion
- Temperature: -20°C to +60°C
- Voltage rating: 300 volts

AWG	Volts	Amps	VA
18	125	10	1250
16	125	12	1500
14	125	15	1875

Line Cord (Fig. 1)

Configuration "8" Laptop Power Cord (Fig. 2)

Configuration "D" Laptop Power Cord (Fig. 3)

Power Cord w/ pigtail (Fig. 4)

160995CP (Fig. 5)

184815CP (Fig.6)

RFI Power Cord (Fig. 7)

Right Angle Computer Power Cord (Fig. 8)

Piggy-Backed Computer Power Cord (Fig. 9)

Power Supply Extension Cord (Fig. 10)

Monitor Power Adapter Cord (Fig. 11)

173892CP (Fig. 12)

Hospital Grade Cord (Fig. 13)

173884CP (Fig. 14)

Power Strip Saver (Fig. 15)

208346CP (Fig. 16)

Part Number	Mfr. Cross Reference No.	Description	Weight (lbs.)	Agency Approvals	Plug Fig.	Length	Color	AWG	Cord Type*	Pricing 1	10	100	250
152186CP	17106BG	2-conductor power cord with pigtail	.20	UL/CSA	1	6'	Beige	18/2	SPT-2	$1.09	$.89	$.65	$.45
124433CP	ST008	2-conductor power cord with pigtail	.16	UL/CSA	1	6'	Black	18/2	SPT-2	1.15	.99	.89	.79
42041CP	17106	2-conductor power cord with pigtail with strain relief	.25	UL/CSA	1	6'	Black	18/2	SPT-2	1.15	.99	.89	.79
146309CP	PC182J6	2-conductor power cord with pigtail (round)	.31	UL/CSA	1	6'	Black	18/2	SJT	1.09	.89	.65	.45
189587CP	VW-1	2-conductor "8" style power cord for laptops and power supplies	.30	UL/CSA	2	6'	Black	18/2	SPT-2	2.95	2.49	2.15	1.79
200791CP	LL114039	2-conductor "D" style power cord for laptops and power supplies	.30	UL/CSA	3	6'	Black	18/2	SPT-2	2.95	2.49	2.15	1.59
38009CP	17237	3-conductor power cord with pigtail	.31	UL/CSA	4	6'	Gray	18/3	SVT	2.49	2.25	1.95	1.75
173809CP	17405	3-conductor power cord with pigtail	.39	UL/CSA	4	6'	Gray	18/3	SJT	2.95	2.49	2.25	1.95
37997CP	17236	3-conductor power cord with pigtail	.30	UL/CSA	4	6'	Black	18/3	SVT	2.79	2.32	2.11	1.99
159409CP	17405B	3-conductor power cord with pigtail	.37	UL/CSA	4	6'	Black	18/3	SJT	2.59	2.15	1.95	1.79
38025CP	17238	3-conductor power cord with pigtail	.39	UL/CSA	4	8'	Black	18/3	SVT	3.29	2.75	2.45	2.25
102007CP	17535B	3-conductor power cord with pigtail	.49	UL/CSA	4	10'	Black	18/3	SVT	3.25	2.75	2.49	2.25
196285CP	LL40378	3-conductor power cord with pigtail	.80	UL/CSA	4	10'	Black	16/3	SJT	3.49	2.79	2.09	1.49
166924CP	17516	3-conductor power cord with pigtail	.67	UL/CSA	4	6' 7"	Black	14/3	SJT	3.95	3.55	3.19	2.79
100271CP	17629B	3-conductor power cord with pigtail	.88	UL/CSA	4	9'	Black	14/3	SJT	4.25	3.55	3.25	2.89
160995CP	17720	3-conductor power cord with pigtail (shielded)	.44	UL/CSA	5	8'	Black	18/3	SVT	2.95	2.65	2.39	2.15
184815CP	17629BR	3-conductor right angle power cord with pigtail	.77	UL/CSA	6	7'	Black	14/3	SJT	2.15	1.89	1.69	1.55
103747CP	17248	3-conductor detachable power supply cord	.34	UL/CSA	7	6'	Gray	18/3	SVT	3.59	3.09	2.75	2.65
213874CP	17660BG	3-conductor detachable power supply cord (shielded)	.40	UL/CSA	7	6'	Beige	18/3	SVT	3.59	3.25	2.95	2.65
38041CP	17249	3-conductor detachable power supply cord	.37	UL/CSA	7	6'	Beige	18/3	SVT	3.49	3.15	2.79	2.49
38050CP	17250	3-conductor detachable power supply cord	.36	UL/CSA	7	6'	Black	18/3	SVT	3.75	3.25	2.75	2.49
161761CP	17742	3-conductor detachable power supply cord (shielded)	.40	UL/CSA	7	6'	Black	18/3	SVT	3.95	3.19	2.39	1.69
132118CP	17500	3-conductor detachable power supply cord	.44	UL/CSA	7	6'	Black	18/3	SJT	4.49	4.05	3.65	3.29
117583CP	17502	3-conductor detachable power supply cord	.37	UL/CSA	7	8'	Gray	18/3	SVT	3.49	3.15	2.79	2.49
171096CP	17758	3-conductor detachable power supply cord	.60	UL/CSA	7	8'	Black	18/3	SJT	3.95	3.55	3.19	2.89
102023CP	17501V	3-conductor detachable power supply cord	.55	UL/CSA	7	10'	Black	18/3	SVT	3.95	3.39	3.09	2.79
192727CP	17501J	3-conductor detachable power supply cord	.64	UL/CSA	7	10'	Black	18/3	SJT	3.95	3.19	2.39	1.79
190625CP	37805	3-conductor detachable power supply cord (shielded)	.75	UL/CSA	7	10'	Beige	18/3	SJT	3.95	3.19	2.39	1.79
163361CP	6952299	3-conductor detachable power supply cord	.33	UL/CSA	7	14'	Black	18/3	SJT	5.39	4.85	4.39	3.95
159361CP	17602	3-conductor detachable power supply cord	.57	UL/CSA	7	6'	Black	16/3	SJT	3.79	3.15	2.79	2.49
142607CP	17502	3-conductor detachable power supply cord (shielded)	.63	UL/CSA	7	6'	Black	16/3	SJT	4.19	3.79	3.39	3.05
125541CP	17504	3-conductor detachable power supply cord	.71	UL/CSA	7	6' 7"	Black	14/3	SJT	4.95	3.99	2.99	2.09
117356CP	8120-6177	3-conductor detachable right angle power supply cord	.41	UL/CSA	8	6'	Gray	18/3	SVT	3.95	3.19	2.39	1.69
38076CP	17250R	3-conductor detachable right angle power supply cord	.54	UL/CSA	8	6'	Black	18/3	SVT	3.49	3.15	2.85	2.55
173251CP	17250RS	3-conductor detachable right angle power supply cord (shielded)	.40	UL/CSA	8	6'	Black	18/3	SVT	3.29	2.65	1.95	1.39
177383CP	17507	3-conductor detachable right angle power supply cord	.66	UL/CSA	8	10'	Black	18/3	SJT	3.95	3.19	2.39	1.79
84937CP	17669-6	3-conductor detachable piggy backed computer power cord	.47	UL/CSA	9	6'	Black	18/3	SJT	6.95	5.59	4.19	2.95
28468CP	PEC	3-conductor computer power supply extension cord	.36	UL/CSA	10	6'	Black	18/3	SVT	3.95	3.59	3.25	2.89
121291CP	PEC2	3-conductor computer power supply extension cord	.55	UL/CSA	10	8'	Black	18/3	SJT	3.95	3.19	2.39	1.79
175855CP	PECUL10	3-conductor computer power supply extension cord	.53	UL/CSA	10	10'	Black	18/3	SVT	2.49	1.99	1.49	1.05
177447CP	MPC1	3-conductor monitor power adapter cord	.16	UL/CSA	11	1'	Black	18/3	SVT	2.95	2.49	2.15	1.79
26382CP	MPC6	3-conductor monitor power adapter cord	.40	UL/CSA	11	6'	Black	18/3	SVT	2.19	1.95	1.79	1.59
173892CP	34J88T-1	3-conductor power cord w/ pigtail hospital grade (green dot)	.65	UL/CSA	12	8'	Black	18/3	SJT	.85	.77	.70	.64
196277CP	E55333	3-conductor power cord w/ hospital grade male (green dot)	.56	UL/CSA	13	6' 6"	Gray	18/3	SJT	3.49	2.79	2.35	1.95
132011CP	17006G	3-conductor power cord w/ hospital grade male (green dot)	.82	UL/CSA	13	10'	Gray	16/3	SJT	8.45	6.79	5.09	3.55
115078CP	17006	3-conductor power cord w/ hospital grade male (green dot)	.84	UL/CSA	13	10'	Black	16/3	SJT	8.95	8.09	7.25	6.55
173884CP	3472WJ698G	3-conductor power cord w/ hospital grade male rt ang (green dot)	.85	UL/CSA	14	9'	Gray	16/3	SJT	7.95	6.39	4.79	3.35
199777CP	PSS-1	3-conductor power cord (power strip saver)	.16	UL/CSA	15	1'	Black	18/3	SVT	1.69	1.55	1.35	1.35
208338CP	SY0527BG	3-conductor power cord (power strip saver)	.16	UL/CSA	15	1'	Beige	18/3	SVT	1.69	1.55	1.35	1.35
208346CP	GPR-2006	3-conductor power cord ("Y" type power strip saver)	.38	UL/CSA	16	2'	Black	18/3	SVT	2.89	2.75	2.59	2.59

*Thermoplastic Cord Jacket Type: SPT-2 (Flat): Junior duty; SVT (Round): Light service; SJT (Round): Junior service

Color Code Legend
New Sale Qty. Save

DataCom and International Transformers and Power Cords

Color Code Legend
New **Sale** Qty. Save Closeout

Voice/Data Coupling Transformer

- Pri./Sec. impedance: 600Ω
- Turns ratio: ±2%
- Resistance (Pri./Sec.): 63Ω/88Ω
- Frequency response: 300-3500Hz (±0.5dB)

PREM

Part No.	Product No.	1	10	100
164128CP	SPT115	$1.05	$.94	$.85

International 50-Watt Plug-In Step-Down Wall Transformer

Converts foreign 220/240VAC to 110/120VAC. Built-in input plugs for Europe/Middle East; England/Africa and Australia/Philippines outlets.

SALE

RCA

- Input voltage: 220/240VAC
- Output voltage: 110/120VAC
- Input selectable prongs for applicable countries • LED status indicator
- 2-prong flat or round receptacle compatible
- Size: 4.4"H x 2.0"W x 2.0"D • Weight: 1.0 lb.

Part No.	Description	1	10	25
191783CP	International trans.	$9.45	$8.59	$7.79

Modem Coupling Transformers

- Insulation resistance: 100MΩ
- Vacuum wax impregnated
- ±20% impedance matching
- ±20% DC resistance matching
- Core type: EI-14
- Hipot tested: 1000VAC

SALE

125356CP

125356CP

Part No.	Mfr. Cross Reference No.	Impedance (Ω)		Resistance (Ω)		Pricing		
		Primary	Secondary	Primary	Secondary	1	10	100
125356CP	XFR6006A14	600CT	600CT	65	55	$1.29	$1.18	$1.08
205962CP	60-282-0	1.2KCT	8	45	1.5	1.34	1.21	.99

Modem Coupling Transformers

- Dielectric strength: 1250VAC

SALE

141621CP

141621CP

117760CP

Part Number	Mfr. Cross Ref. No.	Impedance (Ω)		Resistance (Ω)		Insertion Loss	Pricing		
		Primary	Secondary	Primary	Secondary		1	10	100
141621CP	671-8255	600	600	46.5	67.6	1.25dB @ 1kHz	$1.95	$1.49	$1.05
199540CP	671-8079	600	301	150	150	3.00dB @ 1kHz	2.95	2.65	2.39
117760CP	671-8014	600	600	108	120	2.50dB @ 1kHz	2.15	1.95	1.75
206391CP	TTC-105	600	600	71	117	2.50dB max. @ 800Hz to 3.5kHz	2.95	2.59	1.95

See pages 44 - 46 for Current Sensing Transformers, Power Transformers and Variable Transformers

International Step-Up/Step-Down Transformers

- Wide selection to meet your power requirements

Fig. 1 Fig. 2 Fig. 3

Fig. A Plug Fig. B Plug Output Plug

Part Number	Mfr. Cross Ref. No.*	Fig.	Primary Voltage	Secondary Voltage	Power (VA)	Dimensions			Weight (lbs.)	Pricing		
						H"	W"	D"		1	10	100
99573CP	AC110V50	1/A	220VAC	110VAC	50	2.50	1.63	1.33	0.7	$8.95	$8.09	$7.29
85016CP	AC110V300	3/A	220VAC	110VAC	300	3.50	3.05	3.95	4.8	27.95	24.95	22.49
111851CP	AC110V500	2/A	220VAC	110VAC	500	3.99	3.60	4.84	8.5	34.95	31.49	28.95
142906CP	AC110V1500	2/A	220VAC	110VAC	1500	5.25	4.50	5.75	15.2	79.95	71.95	64.95
99477CP	AC220V50	1/B	110VAC	220VAC	50	2.50	1.63	1.33	0.7	8.95	8.09	7.25
85008CP	AC220V300	3/B	110VAC	220VAC	300	3.50	3.05	3.95	4.8	27.95	24.95	22.49

* Manufacturer may vary
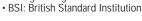
International Power Cords

- 3-conductor detachable power cords
- Excellent resistance to jacket abrasion
- Voltage rating: 300 volts
- BSI: British Standard Institution

SALE

Cord Configuration Chart – End 1

A

Cord Configuration Chart – End 2

117911CP (Fig. 1)   174633CP (Fig. 2)

Part Number	Mfr. Cross Reference No.*	Country	Agency Approvals	Cord Plug Fig.		Length	Cord Color	Conductors	Cord Type	Pricing			
				End 1	End 2					1	10	100	250
117911CP	PCVDE-6B	Europe	All in Fig. 3	A	1	6 ft.	Black	3/.75mm²	H05VVF	$5.49	$4.95	$4.45	$4.05
138270CP	H05VVF	Europe	All in Fig. 3	A	1	6 ft.	Beige	3/1.0mm²	H05VVF/HAR	3.05	2.79	2.55	2.29
174633CP	21071H5182	UK/Ireland	BSI	A	2	8 ft.	Black	3/1.0mm²	H05VVF	6.95	5.59	4.19	2.95

* Manufacturer may vary

European Agency Approvals

Germany	VDE	
Austria	OVE	
Belgium	CEBEC	
Denmark	DEMKO	
Finland	FIMKO	
France	LCIE	
Netherlands	KEMA	
Norway	NEMKO	
Sweden	SEMKO	
Switzerland	SEV	

Fig. 3

Table-Top AC/AC Transformers

176604CP

AC/AC Table-Top Step-Down Transformers

- Input voltage: 120VAC @ 60Hz
- Attached AC cord

SALE

Part Number	Mfr. Cross Ref. No.*	Output			Output Plug ID x OD Plug Type	Color	Size (L" x W" x H")	Cord (AC/AC)	Wt. (lbs.)	Agency Approvals	Pricing			
		Volts (VAC)	Current (A)	Watts (W)							1	10	50	100
196197CP	4182	10	1.0	10	2.1mm x 5.5mm female	Black	3.3 x 2.3 x 1.8	4'/6'	1.5	UL	$2.95	$2.69	$2.49	$2.19
210753CP	TA1-FA	12	3.5	42	2.1mm x 5.5mm female	Black	3.9 x 2.9 x 2.5	6'/6'	2.5	UL/CSA	12.95	11.49	9.95	8.95
176604CP	TA661640	16	4.0	64	2.1mm x 5.5mm female	Black	3.7 x 2.9 x 2.5	6'/6'	2.8	CSA	12.95	11.49	9.95	8.95
147310CP	0931RB	24	0.70	17	3-pin (0.156") female housing	Black	3.2 x 2.2 x 1.9	6'/6'	1.1	UL	1.35	1.25	1.15	1.05
152135CP	100380-001	24	1.46	35	2.1mm x 5.5mm female	Black	3.6 x 2.7 x 2.1	3'5"/5'6	1.9	UL/CSA	3.15	2.85	2.59	2.35

* Manufacturer may vary

AC/DC Table-Top Power Supplies

- Regulated and unregulated outputs (see "Output Plug")
- Input voltage: **Regulated:** 100-240VAC @ 50-60Hz
  Unregulated: 120VAC @ 50-60Hz

Power cords – see below   Stripped   Male   Female

Polarity 1 (+)—•—(−) (center negative)
Polarity 2 (−)—•—(+) (center positive)

136565CP   155213CP   139096CP

POWER

Part Number	Mfr. Cross Reference No. ▲	Output Volts (VDC)	Output Current (A)	Output Power (W)	Output Plug ID x OD/Plug Type/Polarity	Power Indicator	Color	Size (L" x W" x H")	Cords* (DC/AC)	Wt. (lbs.)	Agency Approvals	Pricing 1	10	50	100
211060CP	DV-51AAT†	5	1.0	5	2.1mm x 5.5mm rt angle fem **2** (regul)	No	Black	3.4 x 2.7 x 2.2	6'6"	1.7	UL/CSA	$12.95	$11.69	$10.55	$9.49
196218CP	GT210891005T3	5	2.0	10	2.1mm x 5.5mm female **2** (regulated)	No	Black	3.4 x 1.9 x 1.3	6'/ ²	0.4	UL/CSA/TUV/CE	17.95	14.39	10.79	7.59
161568CP	MA15-050R	5	2.5	15	2.1mm x 5.5mm female **2** (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	19.95	18.95	17.95	17.19
202796CP	MA15-2.5R	5	2.5	15	2.5mm x 5.5mm female **2** (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	19.95	17.95	15.95	13.95
206236CP	A15D3-05MP	5	3.0	15	2.5mm x 5.5mm female **2** (regulated)	No	Black	3.8 x 2.1 x 1.4	5'/ ²	0.4	UL/CSA/TUV	24.95	19.95	14.95	11.95
155205CP	KA52A	5	4.0	20	2.1mm x 5.5mm female **2** (regulated)	No	Black	4.1 x 2.6 x 1.6	6'/6'	1.2	UL/CSA/TUV	29.95	23.99	19.75	17.75
169121CP	AD740U1050	5	4.0	20	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.1 x 2.6 x 1.6	4'/ ²	1.4	UL/CUL/TUV/CE	24.95	22.49	19.95	17.95
213583CP	P30A-1P2J	5	4.0	20	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/ ²	0.7	UL/CUL/TUV/CE	29.95	26.95	24.29	21.89
213575CP	P40A-1P2J	5	5.0	25	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/ ²	0.7	UL/CUL/TUV/CE	32.95	29.69	26.79	23.95
190051CP	APS48EA114†	7	1.5	10	2.5mm x 5.5mm female **2**	No	Black	3.4 x 2.3 x 1.9	6'/6'	1.9	UL/CUL	9.95	7.99	5.99	4.19
206527CP	P40A-1-1P25	7.5	4.0	30	2.1mm x 5.5mm female **2** (regulated)	No	Black	4.3 x 2.7 x 1.5	6'/6'	1.5	UL/CUL/TUV/CE	29.95	26.95	23.95	21.95
170341CP	UP02511091	9	0.3	3	2.1mm x 5.5mm female **2**	No	Black	4.3 x 2.7 x 1.5	6'/ ²	0.6	UL/CSA/TUV	15.69	14.15	12.75	11.45
195805CP	DCR920F12	9	2.0	18	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.2 x 2.6 x 1.4	6'/6'	0.9	UL/CUL/TUV/CE	26.95	24.29	21.85	19.65
195768CP	DCR920F52	9	2.0	18	2.5mm x 5.5mm female **2** (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/6'	0.9	UL/CUL/TUV/CE	24.95	22.49	19.95	17.95
211027CP	KA-52BMOD	9	2.78	25	2.1mm x 5.5mm female **2**	No	Black	4.2 x 2.6 x 1.5	6'/ ²	0.9	CSA/TUV/CE	29.95	26.95	24.25	21.79
211019CP	KA-52B	9	2.78	25	2.5mm x 5.5mm female **2**	No	Black	4.2 x 2.6 x 1.5	6'/ ²	0.9	CSA/TUV/CE	28.95	25.95	23.49	21.19
203182CP	A71222D	11.5	2.2	25	2.1mm x 5.5mm female **1**	No	Black	4.1 x 2.8 x 2.2	6'/6'	2.0	UL/CSA	12.95	11.49	10.49	9.49
136565CP	DDC1210P†	12	1.0	12	Stripped & Tinned	No	Black	3.2 x 2.2 x 1.9	6'/6'	1.2	—	13.95	11.19	8.39	5.89
161576CP	MA15-120R	12	1.25	15	2.1mm x 5.5mm female **2** (regulated)	No	Black	3.3 x 2.0 x 1.3	4'/6'	0.4	UL/CSA/TUV	26.95	24.29	21.85	19.65
140880CP	DC1215ST†	12	1.5	18	Stripped & Tinned	No	Black	3.1 x 2.1 x 1.9	6'/6'	1.5	UL	10.95	9.95	8.95	7.95
216549CP	KWM12F-P2JU	12	1.5	18	2.1mm x 5.5mm female **2** (regulated)	No	Black	4.0 x 1.9 x 1.5	6'/ ³	0.4	UL/CUL/TUV/CE	26.95	24.25	21.85	19.65
157956CP	PS571812D†	12	1.5	18	2.5mm x 5.5mm female **2**	No	Black	3.4 x 2.7 x 2.2	6'/6'	2.0	UL	10.95	9.95	8.95	7.95
183054CP	SPU24-3	12	1.5	18	2.5mm x 5.5mm female **2** (regulated)	Yes	Black	4.2 x 2.6 x 1.2	6'/ ²	0.5	UL/CUL/TUV/CE	26.49	23.85	21.45	19.35
216531CP	KWM12F-P2MU	12	1.5	18	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.0 x 1.9 x 1.5	6'/ ³	0.4	UL/CUL/TUV/CE	26.95	24.25	21.85	19.65
143714CP	DC1220F1†	12	2.0	24	2.1mm x 5.5mm female **2**	No	Black	3.8 x 2.8 x 2.3	6'/6'	2.2	—	14.95	11.99	8.99	6.29
143722CP	DC1220F5†	12	2.0	24	2.5mm x 5.5mm female **2**	No	Black	3.8 x 2.8 x 2.3	6'/6'	2.2	—	12.95	11.69	10.55	9.49
143731CP	DC1220M3†	12	2.0	24	3.5mm male **2**	No	Black	3.8 x 2.8 x 2.3	6'/6'	1.9	—	12.95	11.49	10.49	9.49
203086CP	SW110	12	2.08	25	2.5mm x 5.5mm female **2** (regulated)	No	Black	5.1 x 3.1 x 1.6	6'/ ²	2.0	UL/CSA/CE	24.95	22.49	19.95	17.95
191142CP	DC1225F1	12	2.5	30	2.1mm x 5.5mm female **2** (regulated)	No	Black	3.7 x 2.2 x 1.2	6'/ ³	2.0	UL/CSA/TUV	24.95	22.49	20.29	18.25
191901CP	CUP36-12	12	2.5	30	2.5mm x 5.5mm rt angle fem **2** (regul)	No	Black	4.4 x 2.0 x 0.8	6'/ ³	0.7	UL/CSA/TUV	27.95	24.95	22.49	19.95
155213CP	P40A-3P2JU	12	3.3	40	2.5mm x 5.5mm female **2** (regulated)	Yes	Black	5.5 x 2.3 x 1.5	6'/6'	1.0	UL/CUL/TUV	34.95	31.49	27.95	24.95
203107CP	UP0451E-12P	12	3.75	45	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.7 x 2.4 x 1.4	2'6"/ ²	1.4	UL/CSA/TUV/CE	34.95	31.49	27.95	24.95
203094CP	UP0551A-12PD1	12	4.0	48	2.5mm x 5.5mm female **2** (regulated)	No	Black	5.6 x 2.8 x 1.5	6'/ ²	1.9	UL/CSA/TUV/CE	39.95	35.95	32.95	29.95
155230CP	SPU50-3	12	5.0	60	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.6 x 2.9 x 1.5	6'/6'	1.3	UL/CSA/TUV	49.95	44.95	39.95	35.95
215124CP	U24S106-P2J	15	1.6	24	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.2 x 2.6 x 1.2	6'/ ²	0.5	UL/CSA/TUV	29.95	26.95	24.95	22.95
173593CP	UPS30215P**	15	2.0	30	2.5mm x 5.5mm female **2** (regulated)	Switch	Black	6.8 x 4.3 x 2.2	6'/ ²	1.2	UL/CSA/TUV	27.95	24.95	22.95	20.95
206471CP	P40A4AR01	15	2.0	30	2.5mm x 5.5mm female **2** (regulated)	No	Black	5.6 x 2.9 x 1.6	6'/6'	1.2	UL/CSA/TUV/CE	29.95	26.95	24.95	22.95
206455CP	SC100	16	1.56	25	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.2 x 2.6 x 1.5	6'/ ²	1.2	UL/CSA/TUV/CE	19.95	15.95	11.95	8.95
191898CP	A81807DM+	18	0.7	12.6	2.1mm x 5.5mm female **1**	No	Black	4.2 x 3.1 x 2.5	6'/6'	2.6	—	5.85	5.25	4.75	4.25
196306CP	A51813D†	18	1.3	23	2.1mm x 5.5mm female **2**	No	Black	3.6 x 2.4 x 2.0	6'/6'	1.8	UL/CSA	12.95	10.39	7.79	5.45
203457CP	ZVC30-18-D	18	1.7	30	2.5mm x 5.5mm rt angle fem **2** (regul)	No	Black	4.2 x 1.7 x 1.0	39'/ ³	0.4	UL/CSA/CE	24.95	22.49	19.95	17.95
215116CP	U45S107-P2J	18	2.77	50	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.7 x 3.0 x 1.7	6'/ ²	1.1	UL/CSA/TUV	44.95	40.49	36.45	32.79
203473CP	ZVC45LT19E	19	2.36	45	2.5mm x 5.5mm rt angle fem **2** (regul)	No	Black	4.2 x 1.7 x 1.0	39'/ ³	0.4	UL/CSA/CE	39.95	35.95	32.95	29.95
203481CP	ZVC65NT19E	19	3.42	65	2.5mm x 5.5mm rt angle fem **2** (regul)	No	Black	4.5 x 2.4 x 1.2	39'/ ³	0.5	UL/CSA/CE	49.95	44.95	39.95	35.95
196947CP	SCP60-201500	20	1.5	30	2.1mm x 5.5mm female **2**	No	Black	3.8 x 2.8 x 2.3	6'/6'	1.2	UL/CUL	8.69	7.79	6.99	6.29
169076CP	808050-00	20	2.5	50	2.5mm x 5.5mm female **2** (regulated)	Yes	Black	6.7 x 3.3 x 2.3	6'/ ²	1.4	UL/CSA/TUV	29.95	23.95	17.95	12.59
174844CP	DCR2410F12†	24	1.0	24	2.1mm x 5.5mm female **2** (regulated)	No	Black	4.4 x 3.0 x 2.5	6'/6'	2.6	—	16.95	15.29	13.75	12.39
174852CP	DCR2410F52†	24	1.0	24	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.4 x 3.0 x 2.5	6'/6'	2.7	—	14.95	12.95	10.95	9.95
139096CP	DC2412F1†	24	1.2	29	2.1mm x 5.5mm female **2**	No	Black	4.4 x 3.1 x 2.6	6'/6'	2.5	—	14.95	13.49	12.15	10.95
181884CP	P40A6P2J	24	1.66	40	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.1 x 2.6 x 1.4	6'/6'	0.7	UL/TUV/CE	33.95	30.59	27.55	24.75
161605CP	SPU50-6	24	2.5	60	2.5mm x 5.5mm female **2** (regulated)	Yes	Black	5.6 x 2.9 x 1.6	1'9"/6'	1.3	UL/CSA/TUV	44.95	39.95	35.95	32.95
173665CP	DND-3005†	30	0.5	15	2.5mm x 5.5mm female **2** (regulated)	No	Black	3.0 x 2.5 x 2.2	5'9"/3'2"	1.4	UL/CUL	13.29	10.65	7.95	5.59
205911CP	ADP-25HB	30	0.83	25	2.1mm x 5.5mm female **2** (regulated)	No	Black	3.5 x 2.4 x 1.2	6'/7'	1.1	UL/CUL	14.95	13.49	11.95	10.49
205920CP	DND-3012	30	1.0	30	2.5mm x 5.5mm female **2**	No	Black	4.0 x 2.9 x 2.5	6'/6'	1.7	UL/CUL	12.95	11.49	10.49	9.49
203772CP	SC100	48	0.52	25	2.5mm x 5.5mm female **2** (regulated)	No	Black	4.2 x 2.6 x 1.5	6'/ ³	0.8	UL/CSA/TUV/CE	22.95	20.69	18.59	16.75
215087CP	P30A-8P2J	48	0.56	27	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/ ²	0.7	UL/CUL/TUV/CE	34.95	31.49	28.39	25.49
215079CP	P30A-8P2M	48	0.56	27	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	4.3 x 2.6 x 1.4	6'/ ²	0.7	UL/CUL/TUV/CE	34.95	31.49	28.39	25.49
172064CP	SPU50-9	48	1.25	50	2.1mm x 5.5mm female **2** (regulated)	Yes	Black	5.6 x 2.9 x 1.7	6'/6'	1.3	UL/CSA/TUV	49.95	44.95	39.95	35.95

† 120VAC input only   * See accessory table-top power cord chart next page when AC cord needed   ** Has on/off switch   ▲ Manufacturer may vary

POWER

Color Code Legend
New | Sale | Qty. Save

ATARI 5-Watt Linear Table-Top DC Power Supply
- Output voltage: +5VDC @ 1.0A
- Input voltage: 115VAC @ 60Hz
- Input connector: 6' 2-prong wall plug

Shield
GND, GND, GND
+5VDC @ 1A, +5VDC @ 1A, +5VDC @ 1A

Part No.	Product No.	1	10	50	100
116089CP	C070042	$8.39	$6.75	$5.09	$3.55

MOTOROLA 5.6-Watt Linear Wall Regulated DC Power Supply
- Output voltage:
  +5VDC @ 500mA
  +12VDC @ 130mA
  -12VDC @ 130mA
- Input voltage: 120VAC @ 60Hz
- Input connector: 3-prong AC wall plug

NC, NC, NC, -12VDC, +5VDC, GND, +12VDC

Part No.	Product No.	1	10	50	100
154624CP	5712-305-4C3E	$11.49	$9.19	$6.89	$4.85

SKYNET 5-Watt Linear Table-Top DC Power Supply
- Output voltage:
  +5VDC @ 1.5A
  -5VDC @ 0.1A
- Input voltage: 115/230VAC @ 50-60Hz
- Input connector: 3-prong receptacle

GND, -5VDC, +5VDC, +5VDC, GND

Part No.	Product No.	1	10	50	100
153752CP	LVT-T022	$12.95	$10.39	$7.79	$5.45

JAMECO 9-Watt Table-Top Linear DC Power Supply
- Output voltage:
  +5VDC @ 600mA
  +12VDC @ 250mA
  -12VDC @ 250mA
- Input voltage: 120VAC @ 50-60Hz
- Input connector: 2-prong wall plug
- Output conn.: 5-pin mini DIN with 6' cable

+12, NC, -12, +5, Com

Part No.	Product No.	1	10	50	100
103173CP	JE9100	$20.95	$18.89	$16.99	$14.95

ARTESYN 14-Watt Table-Top Switching Power Supply
- Output voltage:
  5VDC @ 900mA
  12VDC @ 800mA
  -5VDC @ 50mA
- Input voltage: 100-240VAC @ 50-60Hz
- Input connector: 2-prong input power receptacle

GND, 5VDC @ 900mA, -5VDC @ 50mA, GND, 12VDC @ 800mA

Part No.	Product No.	1	10	50	100
196146CP	SSL20-7660	$4.25	$3.85	$3.49	$3.19

MEAN WELL 17-Watt Table-Top Switching DC Power Supply
- Output voltage:
  +5VDC @ 1000mA
  +12VDC @ 500mA
  -12VDC @ 500mA
- Input voltage: 100-240VAC @ 50-60Hz
- Input conn.: 3-prong wall plug with 6' cord
- Output conn.: 5-pin DIN with 5' cable

Pin 2 Ground, Pin 5 +12VDC, Pin 4 -12VDC, Pin 3 +5VDC, Pin 1 Common

Part No.	Product No.	1	10	25	100
159353CP	KA60A	$39.95	$35.95	$32.95	$29.95

Check Out Our Complete Line of Wall-Mount and Table-Top Power Supplies

Part Number	Mfr. ▲	Product Number ▲	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector/Cord**	Output Connector/Cord	Certification	Size L" x W" x H"	Wt. (lbs.)	Type/Color	Mode†	Pricing 1	10	50	100
163969CP	Gatron	AH633N	3.75	+5/0.75	120 @ 60	3-prong/6' cord	4-pin mini DIN M/5'9"	UL/CSA	4.1 x 2.5 x 2.0	1.5	Table/Black	S	$1.09	$.98	$.89	$.81
116089CP	Atari*	C070042	5.0	+5/1	115 @ 60	2-prong/6' cord	7-pin DIN M/6'	UL	3.4 x 2.7 x 2.3	1.6	Table/Black	L	8.39	6.75	5.09	3.55
154624CP	Motorola*	5712-305-4C3E	5.6	+5/0.5, +12/0.13, -12/0.13	120 @ 60	3-prong wall plug	8-pin mini DIN M/6'	UL/CSA	2.9 x 2.6 x 1.9	1.2	Wall/Black	L	11.49	9.19	6.89	4.85
153752CP	Skynet*	LVT-T022	8.0	+5/1.5, -5/0.1	115/230 @ 50-60	3-prong recep./²	5-pin mini DIN M/6'	UL/CSA/TUV	5.5 x 2.9 x 1.5	1.1	Table/Black	L	12.95	10.39	7.79	5.45
103173CP	Jameco*	JE9100	9.0	+5/0.6, +12/0.25, -12/0.25	120 @ 50-60	2-prong/6' cord	5-pin DIN M/6'	UL/CSA	4.8 x 3.1 x 2.5	2.3	Table/Black	L	20.95	18.89	16.99	14.95
155651CP	Globtek	TR2V100MD8	12.2	+5/1, +12/0.3, -12/0.3	120 @ 60	3-prong/6' cord	8-pin mini DIN M/6'	UL	4.5 x 3.0 x 2.5	2.6	Table/Black	L	9.69	8.69	7.79	6.99
203511CP	LZR	AD1590	13.5	+15/0.9	120 @ 60	2-prong wall plug	6-pin mini DIN M/6'	UL/CSA	2.6 x 2.3 x 1.9	1.0	Wall/Black	U	4.29	3.89	3.55	3.25
196146CP	Artesyn*	SSL20-7660	14.0	+5/0.9, +12/0.8 -5/0.05	100-240 @ 50-60	2-prong recep./³	5-pin DIN M/6'	UL/CSA/VDE	4.2 x 2.3 x 1.0	1.0	Table/Black	S	4.25	3.85	3.49	3.19
203596CP	Elpac	WM150	15.0	+5/3	120 @ 60	3-prong/6' cord	5-pin DIN M/6'	UL/CSA	5.4 x 3.9 x 2.6	3.5	Table/Black	L	12.35	11.25	10.19	9.19
107326CP	Keltron	MPC2562	15.2	+5/2, +2.6/0.2	115 @ 60	3-prong/6' cord	3-pin Molex F/3'5"	UL	7.0 x 4.9 x 2.5	3.1	Table/Black	L	3.15	2.85	2.59	2.35
159353CP	Mean Well*	KA60A	17.0	+5/1, +12/0.5 -12/0.5	100-240 @ 50-60	3-prong/6' cord	5-pin DIN M/5'	UL/CSA/TUV	4.1 x 2.6 x 1.5	1.0	Table/Black	S	39.95	35.95	32.95	29.95
189211CP	ACI World	57-12-1500D	18.0	+12/1.5	120 @ 60	2-prong wall plug	8-pin mini DIN M/3'4"	UL/CUL	3.4 x 2.6 x 2.2	1.7	Wall/Black	U	4.95	3.95	2.95	2.25
189843CP	ACI World	EPA201D12	20.0	+12/1.66	100-240 @ 50-60	3-prong recep./²	8-pin mini DIN M/3'4"	UL/CSA/TUV/CE	4.3 x 2.3 x 1.3	1.0	Table/Black	S	9.95	7.99	5.99	4.19
196138CP	DVE	DSA-0283A	23.0	+5/1, +12/1.49 -5/.43	100-240 @ 47/63	2-prong/³	5-pin DIN M/6'	UL/CSA/TUV	4.9 x 2.7 x 1.5	0.8	Table/Black	S	19.95	15.95	11.95	8.95
196269CP	Everglow	PSU25A13	25.0	+5/2.5, +12/1	100-240 @ 47-63	3-prong/6' cord	4-pin mini DIN M/4'	UL/CUL/TUV/CE	4.2 x 2.6 x 1.4	1.2	Table/Black	S	29.95	26.95	24.95	22.95
190650CP	Ault	SW300	25.0	+5/4, +12/1	100-250 @ 50-60	3-prong recep./²	5-pin DIN M/6'	UL/CSA/TUV	5.9 x 3.4 x 2.1	1.5	Table/Black	S	19.95	15.95	11.95	8.95
173825CP	Ault	SW109	25.0	+9/2.78	100-250 @ 50-60	3-prong recep./²	3-pin Molex F/5'8"	UL/CSA/CE	5.0 x 3.0 x 1.5	1.3	Table/Black	S	7.39	6.65	5.95	5.39
190959CP	Mean Well	P25A13D	25.7	+5/2.5, +12/0.8 -12/0.3	100-240 @ 47-63	3-prong/6' cord	5-pin DIN M/6'	CUL/TUV/CE	4.1 x 2.6 x 1.4	1.1	Table/Black	S	37.95	33.95	30.95	27.95
189561CP	Phihong	PSM-3012G	26.0	+5/4, +12/0.5	100-240 @ 50-60	3-prong recep./¹	5-pin mini DIN M/6'	UL/CSA	5.8 x 2.9 x 1.6	1.3	Table/Beige	S	10.99	9.89	8.89	7.99
203043CP	Ault	SC200	32.0	+5/4, +12/1	100-240 @ 50-60	3-prong recep./²	5-pin DIN M/6'	UL/CSA/CE	5.0 x 3.0 x 1.6	1.3	Table/Black	S	19.95	15.99	11.99	8.39
155053CP	Mean Well	SPU41-13D1	40.6	+5/5, +12/1, -12/0.3	100-240 @ 47-63	3-prong/6' cord	5-pin mini DIN F/4'	UL/CSA/TUV	5.5 x 3.0 x 1.6	1.3	Table/Black	S	54.95	49.49	44.55	40.09
203078CP	Umec	UP0551A-12P	48.0	+12/4	100-240 @ 47-63	3-prong recep./²	5-pin DIN M/6'	UL/CSA/CE	5.5 x 2.7 x 1.6	1.3	Table/Black	S	18.35	16.69	15.19	13.79
203588CP	Skynet	SNPA077	72.0	+12/6	115/230 @ 50-60	3-prong/²	5-pin DIN M/6'	UL/CSA/TUV/CE	7.0 x 3.6 x 2.2	2.2	Table/Black	S	22.89	20.79	18.69	16.85
182959CP	Elpac	W7212	72.0	+12/6	95-250 @ 47-63	3-prong/6' cord	5-pin DIN F/6'	UL/CSA/CE	6.2 x 3.8 x 2.6	2.5	Table/Black	S	54.95	43.99	32.99	23.09

* See photo above   ** See Accessory Power Input Cords Chart below when AC cord is needed   † S = switching; L = linear; U = unregulated   ▲ Manufacturer and Product Number may vary

38041CP   38050CP   189587CP

** Accessory Power Input Cords

Part No.	Ref. No.**	Description	Color	AWG	Certification	Cord Length	Wt. (lbs.)	Cord Type	1	10	100	250
38041CP	1	3-conductor power cord	Beige	18/3	UL/CSA	6'	0.4	SVT	$3.49	$3.15	$2.79	$2.49
38050CP	2	3-conductor power cord	Black	18/3	UL/CSA	6'	0.4	SVT	3.75	3.25	2.75	2.49
189587CP	3	2-conductor power cord for 196138CP/196146CP	Black	18/2	UL/CSA	6'	0.3	SPT	2.95	2.49	2.15	1.79

POWER

101127CP

102234CP

Stripped   Male   Female

10081CP

10428CP

We specialize in Wall Transformers – Call for additional OEM PRICING.

AC to AC Wall Transformers

- Input: 120VAC @ 60Hz   • Current rating up to 1.85A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 46 for wall transformer enclosures

We will change any power plug (see page 55) on any AC wall transformer listed (100 piece minimum).

Part Number	Mfr. Cross Reference No.*	Output Rating		Output Plug	Size (in.) (±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VAC)	Current (mA)	ID x OD (mm) Plug Type	H	W	D					1	10	50	100
101127CP	DFX10096B	7	1500	2.5 mm x 5.5 mm female	1.88	2.20	1.95	Black	7' 6"	0.8	UL/CSA	$4.95	$4.49	$3.75	$2.65
219660CP	SLA40810	8	1000	2.1 mm x 5.5 mm female	2.17	2.10	1.60	Black	6'	0.7	UL/CSA	4.95	4.45	3.95	3.59
211078CP	DV-8135A	8.5	1350	2.5 mm x 5.5 mm female	2.20	2.00	1.66	Black	6'	0.9	UL/CSA	4.95	4.49	3.95	3.65
219619CP	ABU09005	9	50	2.1 mm x 5.5 mm female	2.20	1.75	1.45	Black	6'	0.3	UL/CSA	3.29	2.95	2.65	2.39
163310CP	43-3003	9	50	2.1 mm x 5.5 mm female	2.20	1.75	1.45	Black	6'	0.3	UL/CUL	2.95	2.65	2.39	2.15
210729CP	MKA35090300	9	300	2.1 mm x 5.5 mm female	2.20	1.70	1.46	Black	6'	0.4	UL/CUL	3.95	3.55	2.95	2.49
184751CP	M/N40	9	450	2.1 mm x 5.5 mm right angle female	2.75	1.97	1.68	Black	6'	0.8	UL/CSA	4.95	3.99	2.99	2.09
100061CP	AC905F1	9	500	2.1 mm x 5.5 mm female	2.35	1.95	1.56	Black	6'	0.6	UL/CUL	4.59	3.95	3.45	3.25
119204CP	A41090800	9	800	2.1 mm x 5.5 mm female	2.55	1.91	1.74	Black	6'	0.6	UL	4.49	3.59	2.69	1.89
120141CP	AC908M3	9	800	3.5 mm male	2.55	1.91	1.74	Black	6'	0.5	UL	4.95	4.49	4.05	3.65
102234CP	AC910F1	9	1000	2.1 mm x 5.5 mm Female	3.20	2.24	1.93	Black	6'	0.6	UL/CSA	4.49	4.05	3.65	3.29
157041CP	41A9-1000	9	1000	2.5 mm x 5.5 mm female	2.06	2.12	1.63	Black	6'	0.6	UL/CSA	6.95	6.29	5.65	5.09
112336CP	AC915F5	9	1500	2.5 mm x 5.5 mm female	2.50	2.20	1.96	Black	6'	0.9	UL	9.95	8.99	8.09	7.29
217550CP	FW6798	9	1900	Stripped and tinned	2.83	2.47	2.02	Black	6'8"	1.1	UL/CSA	8.95	8.09	7.25	6.55
210745CP	A4110050T	10	500	2.1 mm x 5.5 mm female	2.97	2.07	1.70	Black	6'	0.6	UL/CSA	4.95	4.49	3.95	3.49
101258CP	41A12-500	12	500	2.1 mm x 5.5 mm female	2.76	1.97	1.60	Black	6'	0.6	UL/CSA	4.59	4.15	3.65	3.29
189202CP	A41A12-830	12	830	2.1 mm x 5.5 mm female	2.03	2.09	1.62	Black	6'	0.7	UL/CSA	5.29	4.25	3.19	2.25
10081CP	AC1210F1	12	1000	2.1 mm x 5.5 mm female	2.56	2.39	1.99	Black	6'	0.7	UL/CSA	4.95	3.99	2.99	2.09
100167CP	AC1210F5	12	1000	2.5 mm x 5.5 mm female	3.20	2.41	2.00	Black	6'	0.7	UL/CSA	4.95	4.49	4.05	3.65
10428CP	AC1210M3	12	1000	3.5 mm male	2.60	2.40	1.97	Black	6'	0.6	UL/CUL	4.95	4.49	4.05	3.65
167151CP	HET57116	12	1500	2.1 mm x 5.5 mm female	3.36	2.68	2.15	Black	6'	1.5	—	4.95	3.99	2.99	2.09
206607CP	T48-121667-A030C	12	1600	2.5 mm x 5.5 mm female	2.52	2.22	2.00	Black	6'	0.9	UL/CUL	9.95	7.99	5.99	4.19
153761CP	AC1216M3	12	1600	3.5 mm male	2.50	2.21	1.92	Black	6'	0.9	UL	9.95	7.95	5.95	4.19
206404CP	MGT1220	12	1670	Screw terminals	3.19	2.19	1.93	White	—	0.9	UL/CSA	8.95	8.09	7.25	6.55
210737CP	PPI-1212UL	13	1200	2.1 mm x 5.5 mm female	3.32	2.37	1.96	Black	6'	0.9	UL/CUL	5.95	4.79	3.59	2.69
171408CP	AC1405F1	14	500	2.1 mm x 5.5 mm female	2.76	1.97	1.60	Black	6'	0.6	UL/CSA	4.95	4.49	3.95	3.49
171854CP	DV1485AC	14	850	2.5 mm x 5.5 mm right angle female	3.00	1.95	1.69	Black	6'	0.7	UL/CUL	6.95	5.59	4.19	2.95
201101CP	SPN4340A	15	200	1.3 mm x 3.5 mm female	2.15	1.76	1.47	Black	6'	0.5	UL/CSA	1.69	1.55	1.39	1.29
100108CP	AC1610F1	16	1000	2.1 mm x 5.5 mm female	2.50	2.21	1.93	Black	6'	0.9	UL/CSA	8.95	8.09	7.25	6.55
190490CP	WP571616	16	1000	2.1 mm x 5.5 mm female	3.30	2.70	2.20	Black	8'	1.0	UL/CSA	2.85	2.59	2.35	2.15
163053CP	035-0165	16	1100	2.5 mm x 5.5 mm female	3.20	2.30	1.80	Black	6'	1.1	UL/CSA	8.95	7.19	5.39	3.79
206412CP	MGT1620	16.5	1250	Screw terminals	3.19	2.19	1.93	White	—	0.9	UL/CSA	8.95	8.09	7.25	6.55
121216CP	AC1810F1	18	1000	2.1 mm x 5.5 mm female	3.11	2.36	1.85	Black	6'	1.1	UL/CUL	8.95	7.19	5.39	3.79
185439CP	T5182200-A020G	18	1850	2.1 mm x 5.5 mm right angle female	3.34	2.69	2.19	Black	6'	1.7	UL/CSA	7.95	7.19	6.49	5.85
206421CP	MGT2410	24	420	Screw terminals	2.50	2.04	1.67	White	—	0.6	UL/CSA	8.49	7.65	6.89	6.19
87581CP	AC2405F1	24	500	2.1 mm x 5.5 mm female	2.50	2.24	1.92	Black	6'	0.9	UL/CSA	4.95	4.49	3.99	3.65
206439CP	MGT2420	24	830	Screw terminals	3.19	2.19	1.93	White	—	0.9	UL/CSA	8.95	8.09	7.25	6.55
140599CP	AC2410F1	24	1000	2.1 mm x 5.5 mm female	3.00	2.20	1.90	Black	6'	1.2	UL/CSA	8.95	8.09	7.25	6.55
10102CP	AC2410M3	24	1000	3.5 mm male	3.00	2.20	1.90	Black	6'	1.2	UL/CSA	8.95	8.09	7.25	6.55
176356CP	WP573024	24	1250	2.1 mm x 5.5 mm female	3.36	2.67	2.20	Black	5'8"	1.6	UL/CSA	9.49	8.55	7.69	6.95

* Manufacturer may vary

DC Wall Transformers

112070CP

164101CP

Stripped   Female   Male

155601CP

171301CP

We specialize in Wall Transformers – Call for additional OEM PRICING.

AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz   • Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 46 for wall transformer enclosures

We will change any power plug (pg 55) on any DC wall transformer listed (100 pc. minimum).

Polarity 1 (+)—●—(−) (center negative)   Polarity 2 (−)—●—(+) (center positive)

Part Number	Mfr. Cross Ref. No.*	Output Rating		Output Plug	Size (in.) (±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VDC)	Current (mA)	ID x OD (mm) Plug Type / Polarity	H	W	D					1	10	50	100
112070CP	DC502F5	5	225	2.5 mm x 5.5 mm female **2**	1.90	2.20	1.95	Black	7'	0.3	UL/CSA	$6.95	$6.29	$5.65	$5.09
164101CP	DCR505F12	5	500	2.1 mm x 5.5 mm female **2** (regulated)	2.76	2.02	1.59	Black	6'	0.6	UL/CSA	8.95	8.09	7.25	6.55
155601CP	DC510F1	5	1000	2.1 mm x 5.5 mm female **2**	2.58	1.96	1.71	Black	6'	0.7	UL/CSA	4.95	4.29	3.85	3.55
171301CP	JOD48U08	5	1000	2.1 mm x 5.5 mm female **2** (regulated)	3.13	2.93	2.00	Black	6'	1.0	UL/CUL	9.95	8.95	7.95	6.95

* Manufacturer may vary

Color Code Legend
New Sale Qty Save Closeout

DC Wall Transformers

We specialize in Wall Transformers – Call for additional OEM PRICING.

AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz   • Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 46 for wall transformer enclosures

We will change any power plug (pg 55) on any DC wall transformer listed (100 pc. minimum).

101266CP   169519CP   Stripped Female Male   100853CP   100175CP

Polarity 1 (+)—(•)—(−) (center negative)   Polarity 2 (−)—(•)—(+) (center positive)

Part Number	Mfr. Cross Reference No.*	Output Rating Voltage (VDC)	Output Rating Current (mA)	Output Plug ID x OD (mm) Plug Type / Polarity	Size (in.) (±10%) H	W	D	Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing 1	10	50	100
196411CP	DCR510F12V	5	1000	2.1 mm x 5.5 mm female 2 (regulated)	3.28	2.22	1.91	Ivory	6'	1.0	UL/CUL	$10.95	$8.79	$6.59	$4.65
168604CP	RWP480505	5	1000	2.5 mm x 5.5 mm female 2 (regulated)	3.30	2.20	1.92	Black	6'	1.2	UL/CSA	11.95	10.79	9.69	8.69
219651CP	FE4823-050E120	5	1200	2.5 mm x 5.5 mm female 2	3.45	2.42	1.88	Black	6'	1.2	UL/CUL	8.95	7.95	7.25	6.55
216442CP	AO5C1-05MP	5	1600	2.5 mm x 5.5 mm female 2 (regulated)	2.16	1.76	1.14	Black	6'	0.4	UL/CUL/CE	12.95	11.65	10.49	9.49
196314CP	SYS10891005LW2	5	2000	2.1 mm x 5.5 mm female 2 (regulated)	2.91	1.93	1.59	Black	6'	0.4	UL/CSA/CE	12.95	10.35	7.79	5.49
189190CP	EPA101MU-05B	5	2000	2.5 mm x 5.5 mm female 1 (regulated)	3.16	2.37	1.34	Black	6'	0.4	UL/CUL	12.95	10.35	7.79	5.49
210892CP	EPA101MU	5	2000	2.5 mm x 5.5 mm female 2 (regulated)	3.16	2.37	1.34	Black	6'	0.4	UL/CUL	12.95	10.35	7.79	5.49
196470CP	WR92A2400CCP	5	2400	2.1 mm x 5.5 mm female 2 (regulated)	3.20	2.20	1.90	Black	6'	0.5	UL/CSA	11.95	9.59	7.19	5.09
161541CP	WA15050R	5	2500	2.1 mm x 5.5 mm female 2 (regulated)	2.92	1.95	1.62	Black	6'	0.4	UL/CSA	11.69	10.55	9.49	8.55
190511CP	SADB-0885	6	200	2.1 mm x 5.5 mm female 2 (regulated)	2.56	1.81	1.51	Black	6'	0.4	UL/CUL	5.95	4.79	3.59	2.69
119255CP	DC605F11	6	500	2.1 mm x 5.5 mm female 1	2.31	1.75	1.75	Black	6'	0.6	UL/CUL	3.95	3.59	3.25	2.89
101266CP	DC605F12	6	500	2.1 mm x 5.5 mm female 2	2.44	1.89	1.61	Black	6'	0.4	UL/CSA	3.95	3.59	3.25	2.89
15544CP	DC605M3	6	500	3.5 mm male 2	2.44	1.89	1.61	Black	6'	0.4	UL/CSA	3.95	3.19	2.39	1.69
201451CP	AP4733	6	700	2.1 mm x 5.5 mm female 2	2.60	1.85	1.44	Black	6'	0.5	UL/CUL	4.95	3.95	2.95	2.19
147707CP	DC608F1	6	800	2.1 mm x 5.5 mm female 2	2.33	1.98	1.62	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
206148CP	DSA-0151A-06A	6	2000	2.1 mm x 5.5 mm female 2 (regulated)	3.13	2.09	1.36	Black	6'	0.4	UL/CSA	12.95	10.39	7.79	5.45
196761CP	8233	7.5	1100	2.1 mm x 5.5 mm female 2	2.11	1.88	0.99	Black	6'	0.2	UL/CSA	6.49	5.19	3.89	2.75
127511CP	DC810F1	8	1000	2.1 mm x 5.5 mm female 2	3.10	2.50	2.10	Black	6'	1.3	UL	8.95	8.09	7.25	6.55
202147CP	DC901F12	9	100	2.1 mm x 5.5 mm female 2	3.15	2.36	1.97	Black	6'	0.3	UL/CUL	2.95	2.69	2.45	2.25
134025CP	DC902F11	9	200	2.1 mm x 5.5 mm female 1	2.13	1.71	1.55	Black	6'	0.4	UL/CSA	4.95	4.49	3.95	3.59
100845CP	DC902F12	9	200	2.1 mm x 5.5 mm female 2	2.06	1.70	1.47	Black	6'	0.4	UL/CSA	3.95	3.19	2.39	1.69
170958CP	HKA0920EC	9	200	2.1 x 5.5 mm F 2 (230VAC input; Europe)	2.57	1.70	1.56	Black	6'	0.5	TUV/CE	1.25	.99	.75	.59
100837CP	DIA3590	9	200	3.5 mm male 2	2.57	1.75	1.55	Black	6'	0.4	UL/CSA	3.95	3.59	3.25	2.95
190529CP	AD9123	9	250	2.5 mm x 5.5 mm rt. angle F 2 (reg)	2.47	2.02	1.60	Black	12'	0.5	UL/CSA	5.69	5.15	4.55	3.95
191767CP	CTPS350903002C0	9	300	1.3 mm x 3.5 mm right angle female 2	2.29	1.77	1.47	Black	6'	0.4	UL/CSA	3.69	2.95	2.25	1.55
133891CP	DC903F1	9	300	2.1 mm x 5.5 mm female 2	2.00	1.50	1.50	Black	6'	0.4	UL/CSA	3.95	3.49	3.05	2.75
189237CP	35-9-300C	9	300	2.5 mm x 5.5 mm female 2	2.19	1.73	1.42	Black	6'	0.4	UL/CSA	4.25	3.45	2.55	1.79
216469CP	D350900300U	9	300	2.5 mm x 5.5 mm female 1	2.40	1.69	1.65	Black	6'	0.4	UL/CUL	4.49	3.95	3.55	3.19
169519CP	KX-TCA1	9	350	2.1 mm x 5.5 mm right angle female 1	2.72	1.70	1.55	Dk. Gray	6'	0.4	UL/CSA	4.95	3.99	2.99	2.09
202155CP	DC9035F12	9	350	2.1 mm x 5.5 mm female 2	3.15	2.36	1.97	Black	6'	0.3	UL/CUL	2.95	2.65	2.39	2.15
202163CP	DC904F12	9	400	2.1 mm x 5.5 mm female 2	3.27	2.91	2.28	Black	6'	0.5	UL/CUL	3.59	3.25	2.95	2.69
140636CP	DC904F5	9	400	2.5 mm x 5.5 mm female 2	2.58	2.00	2.00	Black	6'	0.6	UL/CSA	3.69	3.35	2.99	2.69
202171CP	DC9045F12	9	450	2.1 mm x 5.5 mm female 2	3.27	2.91	2.28	Black	6'	0.5	UL/CUL	3.55	3.25	2.95	2.65
163627CP	DC905F11	9	500	2.1 mm x 5.5 mm female 1	2.50	1.90	1.74	Black	6'	0.6	UL/CSA	5.49	4.95	4.45	3.95
170270CP	PQLV1	9	500	2.1 mm x 5.5 mm right angle female 1	2.68	1.90	1.75	Gray	6'	0.6	UL/CSA	3.49	2.79	2.09	1.49
100853CP	DC905F12	9	500	2.1 mm x 5.5 mm female 2	2.50	1.90	1.74	Black	6'	0.6	UL/CSA	4.49	4.05	3.65	3.29
147731CP	43-1125	9	500	2.1 mm x 5.5 mm female 2	2.56	1.95	1.74	Beige	6'	0.6	UL/CSA	5.39	4.65	4.15	3.85
180540CP	FZ1729A	9	500	2.5 mm x 5.5 mm right angle female 2	2.41	1.17	1.57	Black	6'	0.4	UL/CUL	4.49	4.05	3.65	3.29
15561CP	DC905M3	9	500	3.5 mm male 2	2.50	1.95	1.56	Black	6'	0.5	UL/CSA	4.69	3.76	3.28	3.15
202180CP	DC906F12	9	600	2.1 mm x 5.5 mm female 2	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	4.49	4.05	3.65	3.29
100175CP	DC906F5	9	600	2.5 mm x 5.5 mm female 2	2.50	1.90	1.75	Black	6'	0.6	UL/CSA	5.49	4.75	4.25	3.95
202198CP	DC908F12	9	800	2.1 mm x 5.5 mm female 2	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	6.95	5.59	4.19	2.95
164929CP	48-9-900D	9	900	2.1 mm x 5.5 mm female 1	2.72	2.30	1.83	Black	6'	0.9	UL/CUL	6.95	5.59	4.19	2.95
100888CP	48-09-1000D	9	1000	2.1 mm x 5.5 mm female 2	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.95	6.49	5.59	5.19
127503CP	DC910F5	9	1000	2.5 mm x 5.5 mm female 2	2.59	2.43	2.00	Black	6'	0.9	UL/CSA	7.49	6.75	6.09	5.49
15587CP	PAG1200	9	1000	3.5 mm male 2	2.59	2.43	2.00	Black	6'	0.9	UL/CSA	7.95	6.39	4.79	3.35
130526CP	DC912F11	9	1200	2.1 mm x 5.5 mm female 1	2.40	2.00	1.80	Black	6'	1.0	UL/CSA	8.95	7.19	5.39	3.79
143693CP	DC915F1	9	1500	2.1 mm x 5.5 mm female 2	3.25	2.50	2.25	Black	6'	1.3	UL/CSA	9.95	7.99	5.99	4.19
161550CP	WA15090R	9	1670	2.1 mm x 5.5 mm female 2 (regulated)	2.92	1.95	1.62	Black	6'	0.4	UL/CUL	11.95	10.38	9.08	8.65
204071CP	232PS	12	100	2.5 mm ultra-mini male 2	2.28	1.73	1.64	Black	6'	0.4	UL/CSA	14.95	14.25	14.25	14.25

* Manufacturer may vary

Don't worry about backorders. Over 99% of our products are in stock!

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POWER

AC to DC Wall Transformers

Unregulated unless specified under "Output Plug"

- Input: 120VAC @ 60Hz
- Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 46 for wall transformer enclosures

We will change any power plug (pg 55) on any DC wall transformer listed (100 pc. minimum).

POWER

127976CP   15392CP   Stripped   Female   Male   101291CP   213559CP

Polarity 1 ⊕—◉—⊖ (center negative)   Polarity 2 ⊖—◉—⊕ (center positive)

Part Number	Mfr. Cross Reference No. *	Output Rating		Output Plug	Size (in.)(±10%)			Case Color	Output Cord Length	Wt. (lbs.)	Agency Approvals	Pricing			
		Voltage (VDC)	Current (mA)	ID x OD (mm) Plug Type / Polarity	H	W	D					1	10	50	100
163993CP	DC1202F11R	12	200	2.1 mm x 5.5 mm right angle female **1**	2.38	1.70	1.63	Black	6'	0.4	UL/CSA	$4.25	$3.45	$2.55	$1.79
100095CP	DC1202F1	12	200	2.1 mm x 5.5 mm female **2**	2.14	1.82	1.49	Black	6'	0.4	UL/CSA	3.95	3.49	3.06	2.75
158043CP	DC1202F12R	12	200	2.1 mm x 5.5 mm right angle female **2**	2.19	1.65	1.50	Black	6'	0.4	UL/CSA	3.95	3.55	3.19	2.89
149340CP	351202002	12	200	2.5 mm x 5.5 mm female **2**	2.52	1.73	1.50	Black	6'	0.4	UL/CSA	3.85	3.09	2.29	1.59
185658CP	DV1220DCB	12	200	2.5 mm x 5.5 mm right angle female **2**	2.15	1.68	1.49	Black	6'	0.4	UL/CSA	4.25	3.39	2.55	1.95
129322CP	DV1220DC	12	200	2.5 mm x 5.5 mm right angle female **2**	2.20	1.70	1.50	Gray	6'	0.4	UL/CSA	3.69	3.35	2.95	2.65
164283CP	HD1225	12	250	Stripped & tinned w/ strain relief	2.18	1.69	1.49	Gray	6'	0.4	UL/CUL	3.95	3.59	3.25	2.89
219601CP	DCU120025	12	250	Stripped & tinned	2.52	2.01	1.65	Dk. Gray	6'	0.4	UL/CUL	3.95	3.55	3.25	2.85
163491CP	AD1230	12	300	Connector end may vary	2.19	2.16	1.59	Black	6'	0.5	UL/CSA	4.29	3.89	3.49	3.09
201099CP	SPN4230A	12	300	1.3 mm x 3.5 mm female **2**	2.34	1.98	1.66	Black	6'	0.5	UL/CSA	4.49	3.59	2.69	1.89
127976CP	DC1203F12	12	300	2.1 mm x 5.5 mm female **2**	2.60	1.80	1.60	Black	6'	0.7	UL/CSA	4.75	4.25	3.79	3.49
190043CP	41-2-15	12	300	2.5 mm x 5.5 mm right angle female **2**	2.90	2.00	1.55	Black	6'	0.5	UL/CSA	4.49	3.59	2.69	1.89
190502CP	DV1140DC	12	400	2.1 mm x 5.5 mm right angle female **2**	2.60	2.12	1.85	Black	6'	0.5	UL/CUL	5.95	5.39	4.85	4.35
114825CP	DC1205ST	12	500	Connector end may vary	2.52	2.02	1.65	Black	6'	0.6	CUL	4.75	3.85	2.85	2.05
15368CP	DC1205F11	12	500	2.1 mm x 5.5 mm female **1**	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	6.49	5.85	5.29	4.75
195741CP	DC1205F11RG	12	500	2.1 mm x 5.5 mm right angle female **1**	2.50	2.02	1.65	Lt. Gray	6'	0.6	UL/CUL	5.95	4.79	3.59	2.55
102496CP	DC1205F12	12	500	2.1 mm x 5.5 mm female **2**	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
131300CP	SCP41	12	500	2.1 mm x 5.5 mm right angle female **2**	2.60	1.90	1.74	Beige	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
162996CP	DCR1205F12	12	500	2.1 mm x 5.5 mm female **2** (regulated)	3.17	2.20	1.91	Black	6'	0.9	—	7.95	7.19	6.45	5.85
200125CP	DV1250	12	500	2.5 mm x 5.5 mm female **1**	2.35	1.96	1.64	Black	6'	1.0	UL/CSA	4.95	3.99	2.99	2.09
102277CP	DC1205F5	12	500	2.5 mm x 5.5 mm female **2**	2.50	2.08	1.68	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
17267CP	DC1205M3	12	500	3.5 mm male **2**	2.50	1.90	1.57	Black	6'	0.6	UL/CSA	4.95	4.49	4.05	3.65
202201CP	DC1206F12	12	600	2.1 mm x 5.5 mm female **2**	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	4.69	4.25	3.85	3.45
202219CP	DC120F12	12	700	2.1 mm x 5.5 mm female **2**	3.27	2.91	2.28	Black	6'	0.6	UL/CUL	5.79	4.65	3.49	2.45
117479CP	DC1208F1	12	800	2.1 mm x 5.5 mm female **2**	2.99	2.28	1.95	Black	6'	0.9	UL/CSA	6.49	5.85	5.29	4.75
181711CP	48D12800B	12	800	2.1 x 5.5 mm F **2** (240VAC input; UK Plug)	3.18	2.17	2.18	Black	6'	1.1	CE/TUV	3.95	3.55	3.19	2.89
129331CP	48-12-800	12	800	2.5 mm x 5.5 mm female **2**	2.99	2.28	1.95	Black	6'	0.9	UL/CSA	5.49	4.95	4.45	4.05
211051CP	DV-1280 Dual	12	800	2.5 mm x 5.5 mm rt. ang. F **2** w/ input switch	2.58	2.37	1.92	Black	6'	0.9	—	5.39	4.85	4.35	3.95
121232CP	DC1208M3	12	800	3.5 mm male **2**	2.57	2.40	1.95	Black	6'	0.9	UL/CSA	5.95	4.79	3.59	2.55
202227CP	DC1209F12	12	900	2.1 mm x 5.5 mm female **2**	3.94	2.91	2.36	Black	6'	0.9	UL/CUL	3.49	3.15	2.89	2.65
100870CP	DC1210F1	12	1000	2.1 mm x 5.5 mm female **2**	2.58	2.39	1.97	Black	6'	0.9	UL/CSA	7.95	6.95	6.25	5.59
170245CP	DCR1210F12	12	1000	2.1 mm x 5.5 mm female **2** (regulated)	3.20	2.26	1.97	Black	6'	1.2	—	13.95	12.59	11.35	10.19
105478CP	DC1210F5	12	1000	2.5 mm x 5.5 mm female **2**	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	6.95	6.25	5.59	4.95
199566CP	WK1201A01DN	12	1000	2.5 mm x 5.5 mm female **2** (w/ RF filter)	3.21	2.20	2.01	Black	6'	1.2	UL/CSA	5.95	4.79	3.59	2.55
189579CP	BCU12100	12	1000	2.5 mm x 5.5 mm right angle female **2**	3.20	2.19	1.93	Black	6'	1.0	UL/CSA	7.95	6.39	4.79	3.59
15392CP	DC1210M3	12	1000	3.5 mm male **2**	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	7.19	6.49	5.85	5.25
196779CP	D1212950	12	1200	2.5 mm x 5.5 mm female **2**	3.04	2.29	1.85	Black	6"	1.0	UL/CUL	7.79	6.95	6.29	5.69
196445CP	YS1015U12	12	1250	2.1 mm x 5.5 mm female **2** (regulated)	2.92	1.95	1.82	Black	5'	0.4	UL/CSA	11.95	10.79	9.75	8.75
183433CP	WA15-120	12	1250	2.5 mm x 5.5 mm female **2** (regulated)	2.97	1.60	2.47	Black	6'	0.4	UL/CUL	16.95	15.29	13.75	12.39
191353CP	ADP-15FB	12	1250	2.5 mm x 5.5 mm female **2** (regulated)	3.48	2.23	1.20	Black	10' (clear)	0.4	UL/CUL	16.95	13.59	10.19	7.15
189325CP	57D12-1500	12	1500	Cut, stripped and tinned (w/ on-off switch)	3.40	2.60	2.20	Black	8'	1.5	UL	9.95	8.95	7.95	6.95
203035CP	A41215	12	1500	2.1 mm x 5.5 mm female **1**	3.55	2.45	1.86	Black	6'	1.5	UL/CSA	11.95	9.59	7.19	5.05
210809CP	SC102TA1200-B02	12	1500	2.1 mm x 5.5 mm female **2** (regulated)	2.92	1.95	2.58	Black	10'6"	0.6	UL/CUL	12.95	10.39	7.79	5.45
136881CP	DC1215F1	12	1500	2.1 mm x 5.5 mm female **2**	3.40	2.70	2.20	Black	6'	1.5	UL	12.95	10.39	7.79	5.45
101291CP	DC1215F5	12	1500	2.5 mm x 5.5 mm female **2**	3.40	2.70	2.20	Black	6'	1.5	UL	9.95	8.99	8.09	7.25
213559CP	GPC-081	12	1000	Auto lighter power outlet	4.27	2.21	1.87	Black	—	1.1	UL/CUL	14.95	13.49	12.19	10.95
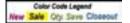
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POWER

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AC to DC Wall Transformers
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- Input: 120VAC @ 60Hz • Current rating up to 2.5A
- Plugs into standard 2-prong/3-prong 115V outlet
- See page 46 for wall transformer enclosures

We will change any power plug (page 55) on any DC wall transformer listed (100 pc. minimum).

Stripped Female Male

174879CP   163643CP

117321CP   123158CP

Polarity 1 (+) ─ (●) ─ (−) (center negative)   Polarity 2 (−) ─ (●) ─ (+) (center positive)

Part Number	Mfr. Cross Reference No. *	Output Rating Voltage (VDC)	Current (mA)	Output Plug ID x OD (mm) Plug Type / Polarity	H	W	D	Case Color	DC Cord Length	Wt. (lbs.)	Agency Approvals	Pricing 1	10	50	100
192786CP	MK135100	13.5	1000	2.1 mm x 5.5 mm female **1**	2.90	2.27	1.95	Black	6'	1.0	UL	$10.95	$8.79	$6.59	$4.65
210817CP	MK135100-1	13.5	1000	2.1 mm x 5.5 mm female **2**	2.90	2.27	1.91	Black	6'	1.0	UL	10.95	9.95	8.95	7.95
212812CP	DC1402F12	14	200	2.1 mm x 5.5 mm female **2**	2.22	1.71	1.45	Black	6'	0.8	UL/CUL	4.49	3.95	3.49	3.19
212821CP	DC1403F12	14	300	2.1 mm x 5.5 mm female **2**	2.22	1.71	1.45	Black	6'	0.8	UL/CUL	4.95	4.49	3.95	3.59
129314CP	DV-1250	14	360	2.5 mm x 5.5 mm right angle female **2**	2.34	1.98	1.60	Black	6'	0.6	UL/CSA	4.95	3.95	2.95	2.19
212839CP	DC1405F12	14	500	2.1 mm x 5.5 mm female **2**	2.22	1.71	1.45	Black	6'	0.8	UL/CUL	5.95	5.35	4.79	4.29
202235CP	DC14065F12	14	650	2.1 mm x 5.5 mm female **2**	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	3.25	2.95	2.65	2.45
123932CP	DC1407F1	14	700	2.1 mm x 5.5 mm female **2**	2.58	2.39	1.97	Black	6'	1.0	UL/CSA	8.49	7.65	6.89	6.19
202243CP	DC1407F52	14	700	2.5 mm x 5.5 mm female **2**	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	5.19	4.69	4.19	3.79
202251CP	DC14085F12	14	850	2.1 mm x 5.5 mm female **2**	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	5.39	4.85	4.35	3.95
202260CP	DC1410F12	14	1000	2.1 mm x 5.5 mm female **2**	3.94	2.91	2.36	Black	6'	0.9	UL/CUL	7.95	6.39	4.79	3.35
202278CP	DC1412F12	14	1200	2.1 mm x 5.5 mm female **2**	3.94	2.91	2.36	Black	6'	0.8	UL/CUL	4.19	3.85	3.49	3.15
190001CP	DC1505F1	15	500	2.1 mm x 5.5 mm female **2**	2.30	2.35	1.90	Black	6'	0.8	UL/CSA	6.95	6.29	5.65	5.09
189982CP	DC1505F5	15	500	2.5 mm x 5.5mm female **2**	2.30	2.35	1.90	Black	6'	0.8	UL/CSA	6.95	5.59	4.19	2.95
155803CP	DC1506F11	15	600	2.1 mm x 5.5 mm female **1**	2.90	2.33	1.90	Black	6'	1.0	UL/CSA	7.95	7.19	6.45	5.85
203502CP	48150900	15	900	2.5 mm x 5.5 mm female **2**	2.55	2.23	1.91	Black	6'	1.0	UL/CSA	6.95	6.25	5.49	4.75
151992CP	AD-SS-2	15	1000	2.1 mm x 5.5 mm female **1**	3.13	2.00	1.88	Beige	6'	1.5	UL/CSA	9.69	8.69	7.85	6.19
191652CP	DC1510F12	15	1000	2.1 mm x 5.5 mm female **2**	3.26	2.20	1.90	Black	6'	1.0	UL/CSA	9.59	8.65	7.79	6.99
169391CP	LISD15B-P1J	15	1000	2.1 mm x 5.5 mm female **2** (regulated)	2.90	1.90	1.60	Black	6'	0.5	UL/CUL	11.95	10.38	9.08	8.65
162317CP	DC1605F1	16	500	2.1 mm x 5.5 mm female **2**	2.23	2.35	1.90	Black	6'	0.8	UL/CSA	7.95	6.95	6.25	5.59
217541CP	FE4116168C030	16.8	300	2.5 mm x 5.5 mm female **2** w/ LED indicator	3.10	2.08	1.63	Black	6'	0.6	UL/CUL	5.95	5.35	4.85	4.35
181729CP	CXV18250	18	250	2.1 mm x 5.5 mm female **2**	2.61	2.04	1.60	Black	6'	0.6	UL	5.95	5.39	4.85	4.39
217568CP	FE4126180P040	18	400	2.5 mm x 2.5 mm female **2** w/ LED indicator	3.45	2.08	1.63	Black	6'	0.8	UL/CUL	6.95	6.25	5.65	5.09
163272CP	48-18-500D	18	500	2.1 mm x 5.5 mm female **2**	2.61	2.30	1.85	Black	6'	0.8	UL/CUL	8.95	8.09	7.25	6.55
168487CP	KWM020188	18	1000	2.1 mm x 5.5 mm female **2** (regulated)	2.91	1.94	1.62	Black	6'	0.4	UL/CUL	16.95	15.29	13.75	12.39
206957CP	WD1H1000LCX	18	1000	2.5 mm x 5.5 mm female **2**	3.36	2.57	2.14	Black	6'	1.4	――――	9.95	7.95	5.95	4.49
203158CP	RJK-24251-N	24	250	2.1 mm x 5.5 mm female **2**	3.24	2.23	1.93	Black	6'	1.3	――――	6.95	6.25	5.59	4.95
102285CP	DC2404F1	24	400	2.1 mm x 5.5 mm female **2**	3.00	2.30	2.00	Black	6'	0.9	UL/CUL	6.95	6.29	5.65	5.09
163635CP	DC2405F11	24	500	2.1 mm x 5.5 mm female **1**	3.12	2.34	1.90	Black	6'	1.0	UL/CUL	8.95	8.09	7.25	6.55
174861CP	DCR2405F12	24	500	2.1 mm x 5.5 mm female **2** (regulated)	3.35	2.68	2.16	Black	6'	1.3	――――	11.95	10.79	9.69	8.75
191556CP	DC2405F5	24	500	2.5 mm x 5.5 mm female **2**	3.12	2.34	1.90	Black	6'	1.0	UL/CUL	8.95	8.09	7.29	6.55
174879CP	DCR2405F52	24	500	2.5 mm x 5.5 mm female **2** (regulated)	3.35	2.68	2.16	Black	6'	1.3	――――	11.95	10.79	9.69	8.75
139088CP	DC2405M3	24	500	3.5 mm male **2**	3.12	2.34	1.90	Black	6'	1.0	UL/CUL	7.95	6.39	4.79	3.35
196322CP	P48240600A020G	24	600	2.1 mm x 5.5 mm female **2**	3.31	2.31	1.92	Black	6'	1.1	UL/CSA	8.95	7.19	5.39	3.79
167118CP	BC2424HP	24	750	2.1 mm x 5.5 mm female **2**	3.34	2.67	2.20	Beige	6'	1.0	UL/CSA	7.95	6.95	6.25	5.59
168495CP	DC2408F1	24	800	2.1 mm x 5.5 mm female **2**	2.91	1.94	1.62	Black	6'	0.4	UL/CUL/TUV	9.95	7.99	5.99	4.19
163651CP	DC2412F11	24	1200	2.1 mm x 5.5 mm female **1**	3.84	3.01	2.56	Black	6'	2.0	――――	14.95	11.99	8.99	6.29
163643CP	DC2412F12	24	1200	2.1 mm x 5.5 mm female **2**	3.84	3.01	2.56	Black	6'	2.0	――――	13.95	12.59	11.35	10.19
117321CP	DC2412F5	24	1200	2.5 mm x 5.5 mm female **2**	3.84	3.01	2.56	Black	6'	2.0	――――	12.95	11.49	9.95	8.95
121241CP	DC2412M3	24	1200	3.5 mm male **2**	3.37	2.70	2.22	Black	6'	2.0	――――	12.95	11.49	9.95	8.95
199523CP	DDU300050	30	500	2.5 mm x 5.5 mm female **2**	2.90	2.27	1.89	Black	6'	1.1	UL/CUL	9.95	8.95	7.95	6.95
215095CP	MW48-4800250	48	250	2.5mm x 5.5mm female **2**	2.91	2.28	1.88	Black	6'	1.1	UL/CUL	7.95	7.15	6.49	5.79
215108CP	MW48-4800500	48	500	2.5mm x 5.5mm female **2**	2.91	2.28	1.88	Black	6'	1.1	UL/CUL	10.95	9.85	8.85	7.95
15309CP	DCM05	3, 4.5, 6, 7.5, 9, 12	500	1.35 x 3.5, 2.1 x 5.0, 2.5 x 5.5 female 2.5, 3.5 **male**, 9V battery snap (LED ind.)	2.98	2.15	2.10	Black	6'	0.7	UL/CSA	8.95	7.95	6.95	6.25
190641CP	DCM08	3, 4.5, 6, 7.5, 9, 12	800	1.5 x 5.5, 2.1 x 5.0, 2.1 x 5.5, 2.5 x 5.5 fem 2.5, 3.5 **male**, polarity sw. (LED ind.)	3.87	2.65	2.29	Black	6'	0.9	UL/CSA	7.95	6.39	4.79	3.35
123158CP	DCM10	1.5, 3, 4.5, 6, 7.5, 9, 12	1000	1.35 x 3.5, 2.1 x 5.0, 2.5 x 5.5 female 2.5, 3.5 **male**, 9V battery snap (LED ind.)	3.71	2.22	2.50	Black	6'	0.9	120 or 220VAC	9.95	8.95	7.95	6.95

* Manufacturer may vary

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Corporate Customers

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POWER

Male & Female Power Jacks

- Use with mating power plugs, below
- Dimensions do not include barrel

Terminals	Code
Solder eyelet	A
PC board	B

Mounting	Code
Panel	C
PCB	D
Panel & PCB	E
Cable	F
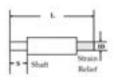
SALE

✻Prepackaged: order in increments of 10, 100 or 1000

Part Number	Mfr. Cross Ref. No.	Dimensions H x W x D (mm)	Type/ Mount	Circuit/ Terminal	Mating Plug (right)	Pricing 1	10	100	1000
			1.3 mm Male Jacks						
101194CP	PP024	6.0 x 6.0 x 9.0	9/D	1/B	1.3 mm female	$.89	$.71	$.53	$.37
			2.1 mm Male Jacks						
101178CP	PP014	10.9 x 9.0 x 14.5	1/D	1/A	2.1 mm female	.49	.44	.39	.35
137672CP	PP013	10.9 x 9.0 x 14.5	6/D	3/A	2.1 mm female	.49	.44	.40	.36
151589CP	DPJ-02IA	13.0 x 12.6 Dia.	8/C	1/A	2.1 mm female	1.09	.93	.70	.65
151554CP	DPJ-026	15.1 x 8.0 Dia.	7/E	1/A	2.1 mm female	1.49	1.25	1.05	.89
159610CP	PJ1014A	35.8 x 12.6 Dia.	11/F	3/A	2.1 mm female	1.49	1.25	1.09	.89
			2.5 mm Male Jacks						
109428CP	PJ025PCB	8.0 x 12.0 x 9.6	5/D	1/A	2.5 mm female	.36	.32	.29	.26
207714CP	HEC0470	11.0 x 9.0 x 14.5	1/D	1/B	2.5 mm female	.45	.35	.29	.25
101186CP	PP014A	11.0 x 9.0 x 14.5	1/D	1/A	2.5 mm female	.59	.49	.39	.29
102091CP	PP15A	20.4 x 9.3 x 11.7	2/C	1/A	2.5 mm female	✻	.07	.05	.04
151562CP	DPJ-026A	15.1 x 8.0 Dia.	7/E	1/A	2.5 mm female	1.49	1.24	1.13	.99
159505CP	PJ1015A	35.8 x 12.6 Dia.	11/F	3/A	2.5 mm female	1.25	1.09	.99	.79
202358CP	HD2388	17.0 x 12.0 Dia.	8/C	3/A	2.5 mm female	.99	.85	.75	.59
			3.5 mm Female Jacks						
101143CP	PJ0352	10.0 x 10.0 x 18.5	3/E	2/A	3.5 mm male	.22	.20	.18	.16
109495CP	PJ035PM	10.5 x 9.0 x 8.8	4/C	2/A	3.5 mm male	.45	.40	.36	.32
165729CP	PJ0354	8.9 x 5.7 Dia.	10/C	3/A	3.5 mm male	.69	.59	.49	.39

Circuit 1   Circuit 2   Circuit 3

Type 1   Type 2   Type 3

Type 4   Type 5   Type 6

Type 7   Type 8   Type 9

Type 10   Type 11

Male & Female Power Plugs

- Use with mating power jack found in table, above
- Solder eyelets 1mm diameter
- Use with AC/DC wall transformers, pgs 51-54
- Use 24 AWG 2 conductor wire, P/N 100280CP, to make custom length power cables, pg 117
- Threaded screw-on housing (strain relief)
- Shield crimp tabs

Strain Relief (A)

Female (1)

Male (2)

Female Right Angle (B)

Hard Plastic Strain Relief (C)

Part Number	Mfr. Cross Ref. No.	Description Plug ID x OD (mm)	Dimensions (mm) S (shaft) x L x ID (strain relief)	Type	Pricing 1	10	100	1000
			Female Plug					
71191CP	PP137	1.3 x 3.5	9.6 x 43.9 x 4.8 (black)	1/A	$.69	$.59	$.49	$.39
191484CP	PP049W	2.1 x 5.5	9.6 x 43.9 x 4.5 (white)	1/A	.79	.69	.59	.45
28759CP	PP049	2.1 x 5.5 (P205)	8.5 x 41.4 x 4.6 (black)	1/A	.59	.49	.39	.29
147328CP	PP049L	2.1 x 5.5 (P205L)	14.0 x 46.4 x 4.6 (black)	1/A	.69	.59	.49	.39
138587CP	PJ021R	2.1 x 5.5 rt. angle	12.0 x 22.5 x 3.9 (black)	1/B	.79	.63	.55	.49
190537CP	PP109S	2.5 x 5.5 (P206S)	9.0 x 43.5 x 4.8 (black)	1/A	.39	.32	.29	.19
28767CP	PP109	2.5 x 5.5 (P206)	10.1 x 45.4 x 4.3 (black)	1/A	.59	.49	.39	.33
191492CP	PP109W	2.5 x 5.5	10.1 x 45.4 x 4.5 (white)	1/A	.69	.59	.49	.39
147336CP	PP109L	2.5 x 5.5 (P206L)	13.6 x 47.5 x 4.8 (black)	1/A	.69	.59	.53	.45
168241CP	PP109N	2.5 x 5.5	13.7 x 36.5 x 3.9 (black)	1/C	.59	.49	.43	.35
			Male Plug					
101135CP	PJ1025	2.5 (P201)	11.1 x 49.0 x 4.3 (black)	2/A	.69	.55	.41	.29
147459CP	PJ1025L	2.5 (P201L)	10.5 x 48.0 x 5.0 (black)	2/A	.45	.41	.36	.33
101151CP	PJ1035	3.5 (P202)	13.8 x 51.8 x 4.2 (black)	2/A	.55	.50	.44	.36
147344CP	PJ1035L	3.5 (P202L)	14.1 x 51.0 x 5.2 (black)	2/A	.69	.59	.49	.39

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SALE

| 163475CP | 102921CP | | 102939CP | 104205CP |

| Part Number	Manufacturer	Product Number	Voltage (VDC)	Size (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
163475CP	Nidec	C34427-55APP	5	1.00 x 1.00 x 0.40	0.5	Ball	90	0.45	-----	22	2"	$5.95	$4.79	$3.59	$2.55
131246CP	Adda	AD0205LX-G50	5	1.00 x 1.00 x 0.40	1.8	Sleeve	100	0.5	UL/CSA/CE	15.6	5.5"	8.49	7.65	6.89	6.19
206156CP	Sunon	KDE0502PFB3-8	5	1.00 x 1.00 x 0.40	1.83	Ball	60	0.3	UL/CSA/TUV/CE	23	5"	11.95	10.95	9.95	8.95
196373CP	Sunon	KD0504PFB2-8	5	1.60 x 1.60 x 0.40	6.5	Ball	250	0.6	UL/CUL/TUV	23	12"	8.49	7.65	6.89	6.19
102921CP	Sunon	KD0504PFS2-8	5	1.60 x 1.60 x 0.40	6.3	Sleeve	120	0.6	UL/CUL	24.3	12"	7.95	6.95	6.25	5.59
171678CP	Delta	AFB0405HHD	5	1.60 x 1.60 x 0.80	8.6	Ball	700	2.0	-----	36	2.5"	5.95	4.79	3.59	2.55
207061CP	Adda	AD0505MB-G90	5	2.00 x 2.00 x 0.40	10.5	Ball	120	0.7	UL/CSA/CE	24	11"	7.95	6.95	6.25	5.59
204433CP	Toyo	USTF802505HW	5	3.15 x 3.15 x 1.00	36	Ball	650	2.0	UL/VDE/CE	29	12"	8.95	8.09	7.25	6.55
212804CP	Sunon	KDE1202PFB3-8	12	1.00 x 1.00 x 0.40	1.3	Ball	40	0.5	UL/CUL/TUV/CE/VDE	26	5.9"	11.95	8.59	7.95	7.49
102912CP	Sunon	KD1202PFB2-8	12	1.00 x 1.00 x 0.40	2.0	Ball	60	0.7	UL/CSA/TUV	30	6"	11.95	8.59	7.95	7.49
212791CP	Sunon	KDE1202PFB1-8	12	1.00 x 1.00 x 0.40	2.4	Ball	80	1.0	UL/CUL/TUV/CE/VDE	33	5.9"	11.95	8.59	7.95	7.49
212767CP	Sunon	KDE1203PFB3-8	12	1.20 x 1.20 x 0.40	2.3	Ball	50	0.6	UL/CUL/TUV/CE/VDE	18.5	5.9"	11.95	8.59	7.98	7.49
203166CP	Adda	AD0312LX-G50	12	1.20 x 1.20 x 0.40	3.0	Sleeve	70	0.84	UL/CUL/TUV/CE	20	5.5"	6.15	5.59	5.09	4.65
212775CP	Sunon	KDE1203PFB2-8	12	1.20 x 1.20 x 0.40	3.0	Ball	60	0.8	UL/CUL/TUV/CE/VDE	25	5.9"	11.95	8.59	7.95	7.49
212783CP	Sunon	KDE1203PFB1-8	12	1.20 x 1.20 x 0.40	3.5	Ball	75	0.9	UL/CUL/TUV/CE/VDE	27	5.9"	11.95	8.59	7.95	7.49
212732CP	Sunon	KDE1235PFB3-8	12	1.40 x 1.40 x 0.40	3.2	Ball	50	0.6	UL/CUL/TUV/CE/VDE	18	5.9"	12.95	9.95	9.49	8.95
212741CP	Sunon	KDE1235PFB2-8	12	1.40 x 1.40 x 0.40	4.5	Ball	60	0.8	UL/CUL/TUV/CE/VDE	21	5.9"	12.95	9.95	9.49	8.95
212759CP	Sunon	KDE1235PFB1-8	12	1.40 x 1.40 x 0.40	5.2	Ball	80	1.0	UL/CUL/TUV/CE/VDE	25	5.9"	12.95	9.95	9.49	8.95
207052CP	Adda	AD0412MB-K90	12	1.60 x 1.60 x 0.25	5.5	Ball	60	0.72	UL/CSA/TUV/CE	25	5"	6.95	6.25	5.59	4.95
191476CP	Common Wealth	FP-108HX/DC	12	1.60 x 1.60 x 0.40	4.0	Sleeve	60	0.72	UL/CSA/TUV/CE	25	12"	5.95	4.79	3.59	2.55
212708CP	Sunon	KDE1204PFB3-H	12	1.60 x 1.60 x 0.40	4.7	Ball	50	0.6	UL/CUL/TUV/CE/VDE	24	12"	6.95	4.95	4.49	4.29
210796CP	Sunon	KD1204PFB3H	12	1.60 x 1.60 x 0.40	4.7	Ball	50	0.6	UL/CSA/TUV/CE	24	14"	6.95	6.25	5.59	4.95
102939CP	Jamicon	JF0410S1H	12	1.60 x 1.60 x 0.40	6.3	Sleeve	110	1.3	UL/CSA/TUV/CE	34.7	10.5"	6.95	6.29	5.65	4.95
189691CP	Sunon	KD1204PFS2	12	1.60 x 1.60 x 0.40	6.3	Sleeve	70	0.9	UL/CSA/TUV	24	12"	7.95	7.19	6.45	5.85
161699CP	Sunon	KD1204PFB2-8	12	1.60 x 1.60 x 0.40	6.3	Ball	70	0.6	UL/CSA/TUV	30	12"	7.95	6.95	6.25	5.59
212716CP	Sunon	KDE1204PFB2-H	12	1.60 x 1.60 x 0.40	6.5	Ball	90	1.1	UL/CUL/TUV/CE/VDE	27	12"	6.95	4.95	4.49	4.29
213428CP	Adda[1]	ADO412HB-G76	12	1.60 x 1.60 x 0.40	6.7	Ball	100	1.2	CE	30.2	12"/3 leads	7.95	6.95	6.25	5.59
212724CP	Sunon	KDE1204PFB1-H	12	1.60 x 1.60 x 0.40	8.3	Ball	110	1.4	UL/CUL/TUV/CE/VDE	34.4	12"	6.95	4.95	4.49	4.29
174131CP	Jamicon	JF0413S1M	12	1.60 x 1.60 x 0.50	3.8	Sleeve	90	1.1	UL/CSA/TUV	29	14"	3.49	3.15	2.85	2.55
213891CP	Adda	AD0412MB-D50	12	1.60 x 1.60 x 0.60	8.1	Ball	100	1.2	UL/CUL/CE	31.8	11.5"	7.95	7.19	6.45	5.85
136178CP	Adda	AD0412MS-C70	12	1.60 x 1.60 x 0.80	5	Sleeve	110	1.32	UL/CSA	23	9"	5.49	4.39	3.29	2.35
195899CP	Sunon	KDE1204PKS2	12	1.60 x 1.60 x 0.80	6.5	Sleeve	70	0.9	UL/CSA/TUV	25.5	12"	7.95	6.39	4.79	3.35
75344CP	Delta	DFB0412M	12	1.60 x 1.60 x 0.80	7.3	Ball	80	0.8	UL/CSA/VDE/CE	28	4.5"	7.69	6.95	6.25	5.65
195881CP	Common Wealth	FP-108G/DC(S1)	12	1.60 x 1.60 x 0.80	7.6	Ball	160	1.92	UL/CSA/CE	32	12"	8.95	7.19	5.39	3.79
206447CP	Delta	DFB0412H	12	1.60 x 1.60 x 0.80	8.5	Ball	100	1.0	UL/CSA/VDE	32	8"	7.95	6.95	6.25	5.59
206164CP	Sunon	KDE1204PKBX-8	12	1.60 x 1.60 x 0.80	10	Ball	90	1.1	UL/TUV/CE	29.4	12"	8.95	7.95	6.95	5.95
212679CP	Sunon	KDE1245PFB3-H	12	1.80 x 1.80 x 0.40	6.1	Ball	60	0.7	UL/CUL/TUV/CE/VDE	23	12"	6.95	4.95	4.69	4.39
212687CP	Sunon	KDE1245PFB2-H	12	1.80 x 1.80 x 0.40	8.0	Ball	90	1.1	UL/CUL/TUV/CE/VDE	29	12"	6.95	4.95	4.69	4.39
212695CP	Sunon	KDE1245PFB1-H	12	1.80 x 1.80 x 0.40	9.5	Ball	110	1.4	UL/CUL/TUV/CE/VDE	33.8	12"	6.95	4.95	4.69	4.39
212644CP	Sunon	KDE1205PFB3-HG	12	2.00 x 2.00 x 0.40	8.5	Ball	60	0.7	UL/CUL/TUV/CE/VDE	26	12"	6.95	4.95	4.69	4.39
212652CP	Sunon	KDE1205PFB2-HG	12	2.00 x 2.00 x 0.40	10.6	Ball	80	1.0	UL/CUL/TUV/CE/VDE	31.5	12"	6.95	4.95	4.69	4.39
212661CP	Sunon	KDE1205PFB1-HG	12	2.00 x 2.00 x 0.40	12.5	Ball	110	1.4	UL/CUL/TUV/CE/VDE	36	12"	6.95	4.95	4.69	4.39
212628CP	Sunon	KDE1205PHB3-H	12	2.00 x 2.00 x 0.60	10.2	Ball	60	0.7	UL/CUL/TUV/CE/VDE	22.5	12"	8.95	7.95	6.95	6.25
206965CP	Adda	AD0512HB-D71	12	2.00 x 2.00 x 0.60	11.7	Ball	100	1.2	UL/CUL/TUV/CE	28.5	5"	8.95	7.95	6.95	6.25
139601CP	Adda	AD0512HS-D71	12	2.00 x 2.00 x 0.60	12	Sleeve	100	1.2	UL/CSA/CE	29	12"	8.95	8.09	7.25	6.55
206172CP	Sunon [2]	KDE1205PHB2-TM	12	2.00 x 2.00 x 0.60	12.7	Ball	140	1.7	UL/CSA/CE	27.8	11"/3 leads	8.95	7.95	6.95	6.25
212636CP	Sunon	KDE1205PHB2-H	12	2.00 x 2.00 x 0.60	13	Ball	80	1.0	UL/CUL/TUV/CE/VDE	29.5	12'	8.95	7.95	6.95	6.25
147491CP	Shicoh	0610-12HH	12	2.36 x 2.36 x 0.40	16.2	Ball	150	1.8	-----	38	5"	8.95	7.19	5.39	3.79
104205CP	Panaflo	FBA06T12L	12	2.36 x 2.36 x 0.60	12	Sleeve	130	1.1	-----	24	6"	7.95	6.39	4.79	3.35
195944CP	Adda	AD612MS-D71GL	12	2.36 x 2.36 x 0.60	14.2	Sleeve	110	1.32	UL/CSA/TUV/CE	28.8	6"	6.95	5.59	4.19	2.95
151327CP	NMB	2406KL-04W-B40-L00	12	2.36 x 2.36 x 0.60	16	Ball	130	1.6	UL/CSA/VDE/CE	31	9"	8.95	7.19	5.39	3.79

[1] **213428CP:** ATX PC type   [2] **206172CP:** Locked rotor alarm
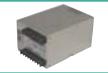
DC Brushless Fans continued on pages 57 & 58

See Jameco's new array of power products on pages 5-55.

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SALE

134586CP 332955CP 75467CP 102875CP

Part Number	Manufacturer	Product Number	Voltage (VDC)	Size (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	Pricing 1	10	50	100
175046CP	Globe Motors	D24-B08A-04W3-000	12	2.36 x 2.36 x 0.80	10.6	Ball	90	0.8	UL/CSA/TUV/CE	22	13"	$6.95	$5.59	$4.19	$2.95
144160CP	Adda	AD0612LB-C70GL	12	2.36 x 2.36 x 0.80	12.6	Ball	80	1.0	UL/CSA/TUV	22.7	6"	8.49	6.79	5.09	3.59
189595CP	Sunon	KD1206PKS2	12	2.36 x 2.36 x 0.80	16.5	Sleeve	150	1.8	UL/CSA/TUV/CE	31	12"	6.95	5.59	4.19	2.95
185818CP	Cheng	CHA6012DB	12	2.36 x 2.36 x 0.90	20.5	Ball	180	2.5	UL	33	12"	6.95	5.59	4.19	2.95
195901CP	Jamicon	JF0625S1L	12	2.36 x 2.36 x 1.00	15.3	Sleeve	170	2.04	UL/CSA/TUV	25.3	10"	2.45	2.25	2.05	1.85
75352CP	Common Wealth	FP108FDC12VS2	12	2.36 x 2.36 x 1.00	15.5	Sleeve	110	1.3	UL/CSA/TUV/CE	25	12"	6.95	5.59	4.19	2.95
136143CP	Delta	SB0612M	12	2.36 x 2.36 x 1.00	17.7	Sleeve	110	1.8	UL/CSA/VDE	26.5	5"	5.95	4.79	3.59	2.55
147029CP	Nidec	TA225DC-M33455-16	12	2.36 x 2.36 x 1.00	20	Ball	220	2.6	UL/CSA	47	11"	6.95	5.59	4.19	2.95
102947CP	Jamicon	JF0625S1H	12	2.36 x 2.36 x 1.00	20.5	Sleeve	230	2.7	UL/CSA/TUV	30.5	11"	6.95	5.59	4.19	2.95
150421CP	Jamicon	JF0625B1H	12	2.36 x 2.36 x 1.00	20.5	Ball	230	2.7	UL/CSA/TUV	30.5	10"	6.95	6.29	5.65	5.09
191548CP	Common Wealth	FP108FDC12VS1B	12	2.36 x 2.36 x 1.00	21	Ball	130	1.6	UL/CSA/TUV/CE	30	12"	7.95	6.39	4.79	3.35
195910CP	Sunon	KD1206PTS1	12	2.36 x 2.36 x 1.00	21.7	Sleeve	190	2.3	UL/CSA/TUV	34	12"	6.95	6.29	5.69	5.19
195936CP	Adda	AD7512HB	12	2.98 x 2.98 x 1.18	10.3	Ball	240	2.88	CE	38.5	12"	9.15	8.35	7.59	6.89
134586CP	Delta [1]	BFB0712H	12	2.98 x 2.98 x 1.18	11.3	Ball	360	2.6	UL/CSA/TUV/VDE	38	4"	11.95	9.59	7.19	5.05
109081CP	Adda	AD0812HS-D71	12	3.15 x 3.15 x 0.60	29	Sleeve	190	2.3	UL/CSA/TUV/CE	31.4	12"	9.95	8.99	8.09	7.25
141920CP	Adda	AD0812HB-C70	12	3.15 x 3.15 x 0.80	27.3	Ball	240	2.9	UL/CSA/CE	34	12"	11.95	9.55	7.17	4.99
16993CP	Various [2] *	FAN7315SL	12	3.15 x 3.15 x 1.00	25-40*	Sleeve	120-200*	1-2*	UL/CSA*	25*	4-12"*	6.95	6.29	5.65	4.95
75361CP	Various*	FAN6315BL	12	3.15 x 3.15 x 1.00	25-40*	Ball	120-200*	1-2*	UL/CSA*	25*	4-12"*	5.95	4.79	3.59	2.55
131748CP	NMB	3110KL-04W-B10	12	3.15 x 3.15 x 1.00	25	Ball	140	1.3	UL/CSA	25	9"	7.95	6.39	4.79	3.35
154288CP	Sunon	KDE1208PTS3-6	12	3.15 x 3.15 x 1.00	29.4	Sleeve	120	1.4	UL/CSA/TUV/CE	24.5	5.5"	4.49	3.59	2.69	1.89
195952CP	Panasonic	FMB-08A12M	12	3.15 x 3.15 x 1.00	30	Sleeve	124	1.49	UL/CSA	28	11"	5.95	3.55	3.19	2.49
123529CP	Adda	AD0812MS-A70GL	12	3.15 x 3.15 x 1.00	32	Sleeve	150	1.8	UL/CSA/TUV	28.3	12"	6.95	5.59	4.19	2.95
195987CP	Panasonic	FBA-08A12M	12	3.15 x 3.15 x 1.00	32.1	Sleeve	170	1.49	UL/CSA	28	4.5"	6.95	5.59	4.19	2.95
166959CP	NMB (Smart Fan) [†]	3110NL-012Q340-00	12	3.15 x 3.15 x 1.00	35	Ball	290	3.5	UL/CSA	35	2"	8.95	7.15	5.39	3.75
191599CP	NMB	3110KL-04W-B50	12	3.15 x 3.15 x 1.00	39	Ball	230	2.7	CSA	34	10"	7.95	6.39	4.79	3.35
185834CP	Panaflo	FBM08A12H	12	3.15 x 3.15 x 1.00	39.6	Sleeve	220	2.1	–––	32	11"	6.95	5.59	4.19	2.95
206181CP	Sunon	KDE1208PTS1-6	12	3.15 x 3.15 x 1.00	42	Sleeve	220	2.6	UL/CSA/TUV/CE	34	9"	7.95	6.95	6.25	5.59
185826CP	NMB [4]	3110KL-04W-B69	12	3.15 x 3.15 x 1.00	42	Ball	340	3.1	UL/CSA/VDE/CE	35	13"/3 leads	6.95	5.59	4.19	2.95
102955CP	Sunon	KD1208PTB1-6	12	3.15 x 3.15 x 1.00	42.5	Ball	220	2.6	UL/CSA/TUV/CE	33.5	12"	5.25	5.10	5.02	4.95
172460CP	Nidec [3]	TA300DCM33406-68	12	3.15 x 3.15 x 1.00	43	Ball	290	3.5	UL/CSA	41	11"/3 leads	9.95	8.99	7.19	5.39
189755CP	Cheng	CHA8012DB	12	3.15 x 3.15 x 1.00	44.3	Ball	300	3.6	UL	37	2" w/ conn.	5.95	4.79	3.59	2.55
191601CP	NMB	3610KL-04-B20	12	3.63 x 3.63 x 1.00	34	Ball	120	1.3	UL/CSA/TUV	27	12"	6.95	6.29	5.65	5.09
196015CP	Cheng	CHA9212CB	12	3.63 x 3.63 x 1.00	44.1	Ball	190	2.28	UL/CSA	31	12"	6.95	5.59	4.19	2.95
75441CP	Common Wealth	FP108BDC12VS1	12	3.63 x 3.63 x 1.00	45	Sleeve	320	3.1	UL/CSA/TUV/CE	32	10"	3.19	2.79	2.49	2.29
196007CP	Jamicon	JF0925S1M	12	3.63 x 3.63 x 1.00	45.4	Sleeve	200	2.4	UL/CSA/TUV/CE	34	12"	2.45	2.25	2.05	1.85
196023CP	Jamicon	JF0925B1M	12	3.63 x 3.63 x 1.00	45.4	Ball	200	2.4	UL/CSA/TUV	34	10"	2.35	2.15	1.95	1.79
154641CP	Nidec	TA350DC-M33422-16	12	3.63 x 3.63 x 1.00	48	Ball	290	3.48	UL/CSA	43	12"	7.49	5.95	4.49	3.19
206199CP	Sunon	KDE1209PTS1-6	12	3.63 x 3.63 x 1.00	48.5	Sleeve	190	2.3	UL/CSA/TUV/CE	32.5	12"	3.99	3.65	3.25	2.95
189780CP	Delta	DFB0912H	12	3.63 x 3.63 x 1.00	49.5	Ball	300	3.1	UL/CSA/TUV	35	5"	7.49	5.99	4.49	3.15
172478CP	Delta [5]	DFB0912H-R00	12	3.63 x 3.63 x 1.00	49.5	Ball	300	3.1	UL/CSA,/VDE/CE	35	8"/3 leads	6.95	5.59	4.19	2.95
190983CP	Sunon	KD1209PTB1-6A	12	3.63 x 3.63 x 1.00	51	Ball	220	2.6	UL/CSA/TUV	34	12"	9.49	7.59	5.69	3.99
116476CP	Jamicon	JF0925S1H	12	3.63 x 3.63 x 1.00	52	Sleeve	350	4.2	UL/CSA/TUV	37	10"	6.95	5.59	4.19	2.95
162739CP	NMB (Smart Fan) [†]	3610KL-04W-B56	12	3.63 x 3.63 x 1.00	55	Ball	430	3.8	UL/CSA/VDE/CE	37	10"/3 leads	7.95	6.39	4.79	3.35
102963CP	Nidec	TA350DC-M33503-55	12	3.63 x 3.63 x 1.00	56	Ball	400	4.8	UL/CSA	45	8"	7.95	6.95	6.25	5.59
213567CP	Nidec [1]	A34124-33	12	3.83 x 3.72 x 1.30	25	Ball	650	7.8	UL/CUL	60	11.5"/3 leads	19.95	17.95	16.25	14.59
174140CP	Common Wealth	FP108MS3	12	4.68 x 4.68 x 1.00	54	Sleeve	140	1.7	UL/CSA/TUV/CE	25	12"	6.95	5.59	4.19	2.95
75467CP	NMB	4710NL-04W-B30	12	4.68 x 4.68 x 1.00	70	Ball	320	2.9	UL/CSA/VDE/CE	34	12"	9.95	8.95	8.09	7.29
174916CP	NMB	4710NL-04T-B30	12	4.68 x 4.68 x 1.00	70	Ball	320	2.9	UL/CSA/VDE/CE	34	terminals	3.95	3.49	3.19	2.89
174086CP	Jamicon	JF1225S1M	12	4.68 x 4.68 x 1.00	74	Sleeve	250	3.0	UL/CSA/CE	37	11"	2.55	2.29	2.09	1.89
102875CP	Delta	WFB1212H	12	4.68 x 4.68 x 1.00	86.5	Ball	360	4.3	UL/CSA/TUV	37.6	12"	10.95	8.79	6.59	4.65
174924CP	Globe Motors	D47-B10A-04T3-000	12	4.68 x 4.68 x 1.00	90	Ball	740	6.8	UL/CSA	39	terminals	6.95	5.59	4.19	2.95
163619CP	NMB (Smart Fan) [†]	4710NL012P535P0	12	4.68 x 4.68 x 1.00	90	Ball	740	8.9	–––	38.5	12"	4.95	3.95	2.95	1.95

[1] **134586CP/213567CP:** Blower type [2] **16993CP:** Replacement for the PC/XT computer power supply fan [3] **172460CP:** Locked rotor alarm [4] **185826CP:** Speed sensor
[5] **172478CP:** Rotor locking input [†] Temperature control: P/Ns **163619CP** (35°C); P/N **166959CP** (40°C); P/N **162739CP** (50°C, 3 leads) * Manufacturer & specifications may vary

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174078CP | **136160CP**

Call for additional OEM PRICING – we carry major manufacturers.

- Low profile
- Ball and sleeve bearings
- Power input by lead wires or terminals
- PBT black thermo plastic frame and impeller
- Agency approved
- Low power consumption
- Low acoustical noise rating

191628CP | **153411CP**

Part Number	Manufacturer	Product Number	Voltage (VDC)	Size (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	1	10	50	100
174941CP	Globe Motors [1]	D47-B15A-04T2-100	12	4.68 x 4.68 x 1.50	97	Ball	520	5.3	UL/CSA/TUV	40	terminals	$3.69	$3.35	$2.99	$2.69
174967CP	NMB [2]	4715KL-04W-B29	12	4.68 x 4.68 x 1.50	97	Ball	520	4.8	UL/CSA/TUV/CE	40	12"/3 leads	6.95	5.59	4.19	2.95
159020CP	Sunon	KDE1212PMS1-6A	12	4.68 x 4.68 x 1.50	107	Sleeve	570	6.8	UL/CSA/TUV	41	12"	12.95	10.39	7.79	5.45
163601CP	Delta (Smart Fan) [†]	WFC1212BE	12	4.68 x 4.68 x 1.50	108	Ball	650	6.6	UL/CSA/VDE	41.3	12"	10.95	8.79	6.59	4.65
94625CP	Sunon	KD1212PMB1-6A	12	4.68 x 4.68 x 1.50	108	Ball	570	6.8	UL/CSA/TUV/CE	24	12"	11.95	9.59	7.19	4.99
189851CP	Delta	WFB1212HE	12	4.68 x 4.68 x 1.50	108	Ball	490	5.9	UL/CSA/VDE/CE	41.3	12"	13.95	11.19	8.39	5.89
206201CP	Sunon	KDE2404PKB3	24	1.60 x 1.60 x 0.80	6	Ball	30	0.7	UL/CSA/TUV/CE	24	12"	7.95	6.95	6.25	5.59
100909CP	Sunon	KD2404PKS2	24	1.60 x 1.60 x 0.80	6.5	Sleeve	50	1.2	UL/CSA/TUV/CE	25.5	12"	7.95	6.39	4.79	3.35
140661CP	NMB	2408NL-05W-B60	24	2.36 x 2.36 x 0.80	18.4	Ball	100	2.4	----	31	2"	5.95	4.79	3.59	2.55
174107CP	Jamicon	JF0625S2M	24	2.36 x 2.36 x 1.00	18	Sleeve	130	3.1	UL/TUV	28.5	10"	4.95	3.99	2.99	2.09
189860CP	Jamicon	JF0625B2M	24	2.36 x 2.36 x 1.00	18	Ball	130	3.1	UL/CSA/TUV/CE	28.5	10"	7.95	7.19	6.45	5.85
174078CP	Jamicon	JF0825S2M	24	3.15 x 3.15 x 1.00	32	Sleeve	130	3.1	UL/CUL/TUV	28	10"	4.49	3.59	2.69	1.89
162923CP	Jamicon	JF0825S2H	24	3.15 x 3.15 x 1.00	39.2	Sleeve	150	3.6	UL/CSA/TUV	31	10"	2.75	2.39	2.15	1.95
136160CP	Jamicon	JF0825B2H	24	3.15 x 3.15 x 1.00	39.2	Ball	150	3.6	UL/CSA/TUV	31	12"	9.49	8.55	7.69	6.95
189878CP	Sunon	KD2408PTB1-6A	24	3.15 x 3.15 x 1.00	42.5	Ball	220	2.6	UL/CSA/TUV/CE	36.5	12"	9.95	7.99	5.99	5.33
191628CP	Rotron Comair [3]	WT24B6X	24	3.15 x 3.15 x 1.25	15	Ball	190	4.6	----	51.4	21"	16.95	13.59	10.19	7.15
189886CP	NMB	3610KL-05W-B30	24	3.63 x 3.63 x 1.00	40.6	Ball	87	2.1	UL/CSA/VDE	34	12"	7.95	6.39	4.79	3.35
174094CP	Jamicon	JF0925S2H	24	3.63 x 3.63 x 1.00	52	Sleeve	190	4.6	UL/CUL	37	10"	7.95	6.35	4.79	3.39
206210CP	Sunon	KDE2412PTS3-6A	24	4.68 x 4.68 x 1.00	67	Sleeve	130	3.1	UL/CSA	35	12"	10.95	9.95	8.95	7.95
175281CP	Globe Motors	D47B10A05W2000	24	4.68 x 4.68 x 1.00	70	Ball	160	2.9	UL/CSA/TUV/CE	34	12"	12.95	10.39	7.79	5.45
206228CP	Sunon [4]	KDE2412PMS1-6A	24	4.68 x 4.68 x 1.00	107	Sleeve	310	7.4	UL/CSA/TUV/CE	41	11"/3 leads	14.95	13.95	12.95	11.95
100968CP	Sunon	KDE2412PMB3-6A	24	4.68 x 4.68 x 1.50	83	Ball	140	3.4	UL/CSA/TUV/CE	35	12"	12.95	10.39	7.79	5.45
153411CP	Sunon	KD2412PMB2-6A	24	4.68 x 4.68 x 1.50	98	Ball	230	5.5	UL/CSA/TUV	36.5	12"	12.59	11.35	10.25	9.19
166730CP	Mechatronics	A9225H48B	48	3.63 x 3.63 x 1.00	51	Ball	100	4.8	UL/CSA/TUV	36	13"	8.79	7.85	6.99	6.19
175468CP	NMB	5920PL-07W-B30	48	6.75 x 5.90 x 1.50	210	Ball	400	14.4	UL/CSA	51	12.5"	7.59	6.85	6.15	5.55
196710CP	PABST [5]	7118N/12	48	6.75 x 5.90 x 1.50	212	Ball	250	12	UL/CSA/VDE/CE	55	13"/3 leads	6.45	5.85	5.35	4.85

[1] 174941CP: Locked rotor protected   [2] 174967CP: Locked rotor alarm   [3] 191628CP: Blower   [4] 206228CP: Locked rotor alarm   [5] 196710CP: Speed sensor   [†] Temperature control: 35°C

AC Tube Axial Fans

Call for additional OEM PRICING – we carry major manufacturers.

- Rating 115 & 220VAC @ 50/60Hz
- Low acoustical noise rating
- Agency approved fans
- Ball and sleeve bearings
- Air flow from 11 to 226 CFM

Fan Power Cords on Next Page

111915CP | **16977CP** | **102904CP** | **75432CP**

Part Number	Manufacturer	Product Number	Voltage (VAC)	Size (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	1	10	50	100
162704CP	Toyo	USTF60301153W	115	2.36 x 2.36 x 1.18	11	Ball	38	4	UL/CSA/CE	29	12" leads	$15.95	$14.39	$12.95	$11.65
213866CP	Fulltech	UF60D11H	115	2.36 x 2.36 x 1.18	10.2	Ball	35	4	UL/CUL/VDE/CE	28	12" leads	15.95	14.39	12.95	11.65
146077CP	Common Wealth	FP108AX-S1-B	115	3.15 x 3.15 x 1.00	23	Ball	140	14	UL/CE	29	12" leads	14.95	13.49	12.15	10.95
75408CP	Fulltech	UF80B12SWH	115	3.15 x 3.15 x 1.00	24	Sleeve	140	14	UL/CSA/TUV/CE	35	12" leads	14.95	13.49	12.15	10.95
212610CP	Fulltech	UF80B12BTH	115	3.15 x 3.15 x 1.00	24	Ball	140	14	UL/CSA/TUV/CE	35	terminals	12.95	11.95	10.95	9.95
111915CP	Fulltech	UF80A12SWL	115	3.15 x 3.15 x 1.50	25	Sleeve	110	12	UL/CSA/TUV/CE	32	12" leads	11.95	10.95	9.95	8.95
16977CP	Fulltech	UF80A12BWL	115	3.15 x 3.15 x 1.50	25	Ball	110	11	UL/CSA/TUV/CE	32	12" leads	13.95	12.59	11.35	10.19
16969CP	Fulltech	UF80A12BTL	115	3.15 x 3.15 x 1.50	25	Ball	110	12	UL/CSA/TUV/CE	32	terminals	14.95	11.99	8.99	7.65
102904CP	Fulltech	UF80A12BWH	115	3.15 x 3.15 x 1.50	29	Ball	120	12	UL/CSA/TUV/CE	36	12" leads	14.95	13.49	12.15	10.95
212601CP	Fulltech	UF80A12BTH	115	3.15 x 3.15 x 1.50	30	Ball	120	12	UL/CSA/TUV/CE	36	terminals	13.95	12.95	11.95	10.95
191564CP	Nidec	TA300AC-AC30477	115	3.15 x 3.15 x 1.50	32	Ball	104	9	UL/CSA/TUV	51	terminals	15.95	12.79	9.59	6.75
75432CP	Sunon	SF11592A-1092HSL	115	3.63 x 3.63 x 1.00	36	Sleeve	130	12	UL/CSA/TUV/CE	39	12" leads	14.95	13.49	12.15	10.95
75459CP	Sunon	SF11592A-1092HBT	115	3.63 x 3.63 x 1.00	37	Ball	110	12	UL/CSA/TUV/CE	40	terminals	15.95	14.39	12.95	11.65

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118965CP   **109874CP**

Call for additional OEM PRICING – we carry major manufacturers.

- Rating 115 & 220VAC @ 50/60Hz
- Low acoustical noise rating
- Agency approved fans
- Ball and sleeve bearings
- Air flow from 11 to 226 CFM

Fan Power Cords Below

106585CP   **102891CP**

Part Number	Manufacturer	Product Number	Voltage (VAC)	Dimensions (W" x H" x D")	Air Flow (CFM)	Bearing	Current (mA)	Power (Watts)	Agency Approvals	Noise (dBA)	Connection (Leads)	1	10	50	100
124062CP	Sunon	SP101AT1122HBT	115	4.68 x 4.68 x 1.00	78	Ball	180	18	CSA/TUV/CE	46	terminals	$15.95	$14.39	$12.95	$11.65
118965CP	Fulltech	UF12A12BTL1	115	4.68 x 4.68 x 1.50	64	Ball	80	15	UL/CSA/TUV/CE	37	terminals	14.95	13.49	12.15	10.95
109874CP	Fulltech	UF12A12STL	115	4.68 x 4.68 x 1.50	81	Sleeve	150	15	UL/CSA/TUV/CE	38	terminals	12.95	10.39	7.79	5.45
111894CP	Common Wealth	FP108-1-S1/W	115	4.68 x 4.68 x 1.50	105	Sleeve	180	17	UL/CSA/CE	47	12" leads	13.95	12.59	11.35	10.19
106585CP	Common Wealth	FP108-1-S1/T	115	4.68 x 4.68 x 1.50	105	Sleeve	180	12	UL/CSA/CE	47	terminals	14.95	13.49	12.15	10.95
16934CP	Common Wealth	FP108-1-S1-B	115	4.68 x 4.68 x 1.50	105	Ball	200	17	UL/CSA/TUV/CE	47	terminals	16.95	15.29	13.75	12.39
212599CP	Fulltech	UF12A12BWH	115	4.68 x 4.68 x 1.50	106	Ball	190	15	UL/CSA/TUV/CE	46	12" leads	12.95	11.95	10.95	9.95
206308CP	Adda	AA1281UB-AT	115	4.68 x 4.68 x 1.50	107	Ball	230	24	CE	48	terminals	13.95	12.95	11.95	10.95
102883CP	Sunon	SP100A-1123XBT	115	4.68 x 4.68 x 1.50	117	Ball	240	20	UL/CSA/TUV/CE	50	terminals	14.95	13.95	12.95	11.95
108724CP	Fulltech	UF15AC12BTH	115	6.75 x 5.90 x 1.50	211	Ball	230	28	UL/CSA/TUV/CE	58	terminals	29.95	26.95	23.95	21.49
212564CP	Fulltech	UF15PC12BTL	115	6.75 x 5.90 x 2.00	113	Ball	260	30	UL/CSA/TUV/CE	41	terminals	29.95	26.95	23.95	21.49
212572CP	Fulltech	UF15PC12BWL	115	6.75 x 5.90 x 2.00	113	Ball	260	30	UL/CSA/TUV/CE	41	12" leads	29.95	26.95	23.95	21.49
212581CP	Fulltech	UF15PC12BWH	115	6.75 x 5.90 x 2.00	226	Ball	250	30	UL/CSA/TUV/CE	58	12" leads	29.95	26.95	23.95	21.49
189683CP	Fulltech	UF15PC12BTH	115	6.75 x 5.90 x 2.00	226	Ball	250	30	CSA	58	terminals	29.95	26.95	24.29	21.79
174932CP	NMB	3115FS-23T-B10	220	3.15 x 3.15 x 1.50	25	Ball	30	4.6	UL/CSA/TUV/CE	25	terminals	12.95	10.39	7.79	5.45
100917CP	Sunon	SF23080A/2083HSL	220	3.15 x 3.15 x 1.50	30	Sleeve	60	13.5	UL/CSA/TUV/CE	35	12" leads	13.95	11.19	8.39	5.89
175003CP	NMB	4715MS-23W-B10	220	4.68 x 4.68 x 1.50	50	Ball	45	6	UL/TUV/CE	28	12" leads	13.95	11.19	8.39	5.89
209365CP	Innovative	4C-230LB	220	4.68 x 4.68 x 1.50	63	Ball	60	9	TUV/CE	34	10" leads	13.95	12.95	11.95	10.95
102891CP	Sunon	DP200A-2123XBT	220	4.68 x 4.68 x 1.50	117	Ball	120	21	UL/CSA/TUV/CE	50	terminals	15.95	14.39	12.95	11.65

Fan Guards, Filters & Cords

Compatible with DC and AC Fans – pages 56 - 59

- All guards and filters fit all fans by matching the size dimension.
  Example: P/N 75408CP fan (3.15") matches P/N 31923CP metal guard (3.15").

123502CP   **120037CP**   **31923CP/123511CP**

25734CP   **138561CP/163459CP 196816CP**   **138579CP/192874CP 130104CP**

Part No.	Description	1	10	100	250
123502CP	1.60" metal (chrome) guard	$.63	$.49	$.42	$.39
163432CP	2.00" metal (chrome) guard	.79	.71	.64	.58
120037CP	2.36" metal (chrome) guard	.99	.85	.69	.59
31923CP	3.15" metal (chrome) guard	.79	.65	.52	.49
123511CP	3.63" metal (chrome) guard	.89	.75	.59	.55
25734CP	4.68" metal (chrome) guard	1.09	.89	.69	.65
138561CP	3.15" plastic guard with mesh	1.39	1.19	1.05	.95
163459CP	3.63" plastic guard with mesh	1.75	1.49	1.25	1.09
196816CP	4.68" plastic guard with mesh	1.95	1.75	1.49	1.25
138579CP	3.15" alum. washable filter	2.95	2.65	2.39	2.15
192874CP	3.63" alum. washable filter	2.35	2.15	1.89	1.69
130104CP	4.68" alum. washable filter	3.49	3.25	2.95	2.65

Fan Power Cords: 24" Straight and Right-Angle

- Cord type: SPT-1 (2) conductor black   • Voltage rating: 300V   • Temperature range: 60°C   • Fits all terminal fans

Part No.	Description	Length	1	10	100	250
28564CP	Straight socket cord	24"	$.89	$.75	$.69	$.65
104192CP	90° angle socket cord	24"	1.19	1.09	.96	.87

28564CP   **104192CP**

CPU Heat Sinks and Fans

See page 76 for Heat Sink Compounds
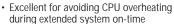
- Excellent for avoiding CPU overheating during extended system on-time
- High efficiency cooling fans
- Easy installation – just snap it in

151298CP   **196242CP**   **181278CP**   **195784CP**   **196074CP**   **190545CP**

206244CP   **185607CP**   **118092CP**   **129226CP/129234CP**   **191636CP**   **174115CP**   **203123CP**

See page 155 for detailed specifications and prices!

Color Code Legend: New   Sale   Qty Save   Closeout

Color Code Legend
New Sale Qty. Save

12-Bit Analog/Digital DAC and Stepper Motor Control Board

- High speed serial port interface up to 230.4kbps
- 4 channels with precision signal conditioning – 100mV, 2.5V and 5.0V inputs
- 24 digital I/O (TTL compatible), 11 analog channels with 12-bit resolution
- PWM, period measurement and stepper motor functions
- Free 32-bit DLL, OCX and Labview driver for rapid system development
- Size: 6.0"L x 2.6"W   • Weight: 0.7 lbs.

Driver Schematic

SALE

Requires: External driver circuit parts kit (P/N 208573CP, below) – 5 ea. 1kΩ & 330Ω 1/4W resistors, MJE 3055T transistor and 1N4003 diode

Part No.	Description	1	10
109911CP	Analog/digital DAC board	$129.95	$116.99
208573CP	Ext. driver circuit parts kit	3.49	3.15

PONTECH Servo Controller Board

- Controls 1 to 8 servos per board, 8-bit precision
- Interface to PC through RS-232 port @ 2400-19,200bps
- 5 channel, 8-bit A/D input port for reading 0 to 5V
- IR-receiver & transmitter feature
- Source/sink: 25mA per pin   • 8k EEPROM
- Size: 1.7"L x 1.4"W (main board); 1.1"L x 0.9"W (infrared board)

Includes: Manual, supplement & sample code software

Part No.	Description	1	10
153648CP	Servo controller board	$89.95	$80.95

Scott Edwards Electronics, Inc.
Mini SSC II Module (Serial Servo Controller)

- Controls 8 pulse-proportional servos
- Receives serially at 2400 or 9600 baud
- Module is addressable, thus allowing two units to share the same line to control a total of 16 servos
- Connections to serial input can be established using a modular jack (P/N 115553CP, pg 175) or modular adapter from DB9 to RJ11 (P/N 114737CP, pg 175)
- Size (PCB): 1.9"L x 1.4"W   • One-year warranty

Part No.	Description	1	10
151001CP	Serial servo controller module	$49.95	$42.95

PONTECH
32-Bit Stepper Motor Controller

One Axis

- Controls one bipolar stepper motor with 32-bit absolute position
- Interface to PC through RS232 or RS485 @ 2400-19,200 bps
- Full, half or wave step modes
- Multiple boards may share same serial line (RS485 only)
- 2 channel general purpose 8-bit A/D input port for reading 0 to 5V
- 4-bit digital input for home limits
- Addressable up to 255 boards
- Size: 4.4"L x 2.3"H   • Weight: 0.7 lbs.

Includes: Manual and sample code software

Part No.	Description	1	10
153621CP	32-bit controller	$159.95	$149.95

rmv electronics
Multi-Stepper Motor Control Board

- Simultaneous/independent control of up to 16 stepper motors through a single serial port
- High speed serial communication interface 9.6kbps-230.4kbps
- 11 analog channels, A/D converter, 10 or 12 bits resolution
- 24-bit position register; can be read while motor is moving
- Linear acceleration/deceleration capability up to 8500 step/sec.
- Full step (monophasic and biphasic), half step and external driver modes
- Current mode driver drives coils up to 2A/45V
- Automatic power down prevents motor overheating
- External driver control outputs: step, direction and power control
- 26 digital I/O and two SPI interfaces for control of external devices
- 32 bits DDL interface for Windows® 9X, NT & Linux
- Internal FIFO RAM (128 bytes) allows customized motion profiles
- Size: 7.7"L x 5.0"W x 1.0"H   • Weight: 0.7 lbs.

Shown w/ motors – not included

Part No.	Description	1	10
168727CP	Stepper motor control brd	$399.95	$379.95

KAE Industrial Motion Controllers for Brush, Brushless and Stepper Motors

All JR Kerr Automation Engineering controllers include integrated power amplifiers. Up to 32 controllers can be daisy-chained from a single full-duplex RS485 port. For RS-232 to RS-485 adapter see P/N 184971CP (below).

| 184989CP | 185009CP | 184971CP | 184997CP | 184962CP | 184954CP |

184989CP: PIC-SERVO motor control board
- For brush-type DC motors with 2 or 3 channel incremental encoders
- P.I.D. Servo control, trapezoidal position profiling, velocity mode, 32-bit resolution
- Integrated 12 to 48VDC supply power amplifier @ 3A continuous, 6A peak
- Limit switch inputs, general purpose analog input, PWM, DIR output for use with external amps

185009CP: PIC-SERVO 3PH motor control board for brush or brushless motors
- For 3-phase brushless motors with hall effect sensors or conventional DC brush-type motors
- High current amplifier: 7A continuous, 10A peak, 12 to 48VDC supply
- Same features as 184989CP above but with support for linear & circular interpolation using the PIC-SERVO CMC chipset

184971CP: Z232-485 serial port adapter
- Lets you operate the controllers above from any standard RS-232 port

184997CP: PIC-STEP motor control board
- Integrated indexer and driver for 2 or 4 phase stepper motors
- Full/half step bipolar chopper drive, 2A per phase, 7.5 to 46VDC supply
- Trapezoidal position profiling, velocity mode, up to 50,000 steps per second
- Limit switch inputs, general purpose outputs, step/dir outputs for use with external drivers

184962CP: PIC-I/O multifunction I/O control board
- 12 I/O bits software configurable as inputs or outputs
- One counter input
- Three 8-bit analog inputs, two PWM outputs with high current drivers

184954CP: Simple sequencer stand-alone controller
- Programmable master controller for building stand-alone systems with the controllers above
- Plugs into a socket on the Z232-485 board (P/N 184971CP, left)

Part No.	Description	Size (L" x W" x H")	1	10
184989CP	PIC-SERVO	3.1 x 2.1 x 0.9	$179.95	$161.95
185009CP	PIC-SERVO 3PH	3.1 x 3.1 x 1.0	239.95	215.95
184971CP	Z232-485	3.1 x 2.1 x 0.5	59.95	53.95

Part No.	Description	Size (L" x W" x H")	1	10
184997CP	PIC-STEP	3.1 x 2.1 x 0.9	$159.95	$143.95
184962CP	PIC-I/O	3.1 x 2.1 x 0.6	99.95	89.95
184954CP	Simple sequencer	2.1 x 1.0 x 0.4	59.95	53.95

12VDC Bipolar Stepper Motor
3.6˚ / Step

- No. of phases: 2
- Detent torque: 80 g-cm
- Holding torque: 600 g-cm
- Phase resistance: 25Ω
- Phase inductance: 31mH
- Current: 480mA
- Mounting hole size: 0.11"
- Shaft size: 0.43"L x 0.197"Dia.
- Motor size: 1.66"Dia. x 1.31"H

Part No.	Mfr. Cross Ref. No.	1	10	50
105881CP	SM4203	$6.49	$5.85	$5.29

12VDC Unipolar Stepper Motor
3.6˚ / Step

- No. of phases: 4
- Detent torque: 80 g-cm
- Holding torque: 600 g-cm
- Phase resistance: 75Ω
- Phase inductance: 39mH
- Current: 150mA
- Mounting hole size: 0.11"
- Shaft size: 0.43"L x 0.197"Dia.
- Motor size: 1.66"Dia. x 1.28"H

Part No.	Mfr. Cross Ref. No.	1	10	50
105890CP	SM4200	$9.69	$8.75	$7.85

12VDC Unipolar Stepper Motor
.09˚ / Step

- No. of phases: 4
- Detent torque: 400 g-cm
- Holding torque: 400 g-cm
- Phase resistance: 200Ω
- Phase inductance: 49.5mH
- Current: 60mA
- Mounting hole size: 0.14"
- Shaft size: 0.36"L x 0.194"Dia.
- Motor size: 1.18"Dia. x 0.68"H

Part No.	Mfr. Cross Ref. No.	1	10	50
173180CP	30BYJ02AH	$11.49	$10.35	$9.35

Bipolar and Unipolar Stepper Motors

| Fig. 1 | Fig. 2 | Fig. 3 | Fig. 4 | Fig. 5 | Fig. 6 | Fig. 7 | Fig. 8 |

- Excellent for precision control
- Can be operated in forward/reverse mode
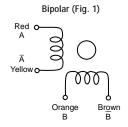- See pages 7-11 for compatible power supplies

Part Number	Mfr. Cross Ref. No.	Fig.	Step Angle	No. of Phases	Drive System	Volt. (VDC)	Phase Resis. (Ohms)	Curr. (mA)	Phase Inductance (mH)	Detent Torque (g-cm)	Holding Torque (g-cm)	Mounting Hole Space Diagonal (in.)	Mounting Holes (in.)	Shaft Dia. (in.)	Shaft Length (in.)	Motor Dia. (in.)	Motor Height (in.)	Pricing		
																		1	10	50
117954CP	LB82773-M1	1	7.5°	2	Bipolar	5	6	800	7	100	1080	2.60	1.95	0.250	0.75	2.25	1.00	$4.29	$3.45	$2.59
163395CP	5017-935[1]	2	0.9°	2	Bipolar	8.4	30	280	25	36	791	1.73	0.15	0.155	0.29	1.64	1.20	4.95	3.75	2.65
163408CP	4017-806[1]	2	1.8°	2	Bipolar	9.2	38	240	52	36	664	1.73	0.15	0.155	0.23	1.66	1.25	2.49	1.89	1.35
105881CP	SM4203[2/3]	3	3.6°	2	Bipolar	12	25	480	31	80	600	1.73	0.11	0.197	0.43	1.66	1.31	6.49	5.85	5.29
164056CP	M82101-P1	1	7.5°	3	Unipolar	5	20	255	5	9	94	1.4	0.13	0.078	0.35	1.00	0.46	1.85	1.69	1.55
151861CP	C42M048A04	4	7.5°	4	Unipolar	5	9	550	10	90	750	1.94	0.13	0.117	0.40	1.65	0.83	6.19	5.59	5.05
171601CP	PF35T48L4[4]	1	3.6°	4	Unipolar	7	20	280	9	40	680	1.68	0.14	0.078	0.47	1.38	0.58	4.39	3.49	2.65
166705CP	PM42S-096	1	3.8°	4	Unipolar	12	84	140	16	60	450	1.95	0.13	0.117	0.40	1.66	1.64	3.95	2.95	2.15
105890CP	SM4200[3]	3	3.6°	4	Unipolar	12	75	150	39	80	600	1.73	0.11	0.197	0.43	1.66	1.28	9.69	8.75	7.85
213321CP	35BY48-27	7	7.5°	4	Unipolar	12	15	800	68	90	460	1.96	0.13	0.078	0.25	1.38	8.30	14.95	13.49	12.29
173180CP	30BY102AH[5]	5	.09°	4	Unipolar	12	200	60	49.5	400	400	1.42	0.14	0.194	0.36	1.18	0.68	11.49	10.35	9.35
192794CP	PM425048[6]	5	7.5°	4	Unipolar	24	45	500	17.5	39	570	1.97	0.09	0.117	0.33	1.66	0.54	2.05	1.85	1.69
210382CP	5620	1	7.5°	4	Unipolar	24	100	436	60	40	380	1.67	0.13	0.078	0.40	1.38	0.58	5.95	5.49	4.95
210391CP	STP42N196S	8	3.75°	4	Unipolar	24	110	436	60	60	600	1.95	0.13	0.118	0.42	1.65	0.54	6.95	6.25	5.59

[1] **163395CP/163408CP:** Dual shaft
[2] **105881CP:** P/N 25216CP (IC, MC3479P, pg 72) biphase stepper motor driver can be used to operate
[3] **105881CP/105890CP:** Use P/N 161998CP for shaft coupler, see page 190
[4] **171601CP:** Dual shaft w/ 10 tooth gear
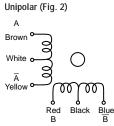[5] **173180CP:** Geared (7.5˚/Step)
[6] **192794CP:** Single shaft w/ 12 tooth gear

GBM   Bipolar and Unipolar Stepper Motors

- Bearing type: ball
- Dielectric strength: 500V, 50Hz/minute
- 18" lead wires
- Step angle: 1.8˚
- Ambient temperature: -10˚C to +55˚C
- Insulation resistance: 100MΩ @ 500VDC
- Use P/N 161998CP, pg 190, for shaft coupler

Bipolar (Fig. 1)

Red
A

Ā
Yellow

Orange
B

Brown
B̄

Unipolar (Fig. 2)

A

Brown

White

Ā
Yellow

Red
B

Black

Blue
B̄

† NEMA 17

† NEMA 23

Part Number	Product Number	Fig.	NEMA† Form	No. of Phases	Drive System	Voltage (VDC)	Phase Resistance (Ohms)	Current (mA)	Phase Inductance (mH)	Detent Torque (g-cm)	Holding Torque (g-cm)	Mounting Hole Space Diagonal (in.)	Mounting Holes (in.)	Shaft Diameter (in.)	Shaft Length (in.)	Motor Diameter (in.)	Motor Height (in.)	Weight (lbs.)	Pricing		
																			1	10	50
155432CP	42BYG228	2	17	4	Unipolar	12	30	400	23	220	2,000	1.73	0.1	0.197	0.9	1.7	1.5	0.5	$17.95	$16.29	$14.59
155459CP	42BYG023*	1	17	2	Bipolar	12	30	400	36	220	2,100	1.73	0.1	0.197	0.6	1.7	1.3	0.5	17.95	16.29	14.59
172646CP	42BYG205	2	17	4	Unipolar	9.6	75	480	15	220	2,300	1.73	0.1	0.197	0.9	1.7	1.4	0.5	17.95	16.19	14.55
162026CP	57BYG084	2	23	4	Unipolar	12	20	600	22	725	6,000	2.65	0.2	0.250	1.0	2.2	2.0	1.3	26.95	24.29	21.85
206025CP	23PMC10804	2	23	4	Unipolar	5.4	8	1500	56	1300	20,000	2.65	0.2	0.184	0.9	2.2	3.0	1.9	29.95	26.95	24.25

* dual shaft

Color Code Legend
New Sale Qty. Save Closeout

3-150VDC Motors

MITSUMI
NMB
NICHIBO MOTOR
star motor
JOHNSON ELECTRIC

154915CP/154923CP   177498CP   181411CP   192807CP   153656CP   174991CP

181112CP   174692CP   162579CP   206949CP   181964CP   173681CP

190035CP

161082CP

SALE

Part Number	Manufacturer Cross Reference No.	Manufacturer	Nominal Voltage (VDC)	Voltage Range (VDC)	Current (Amps)	RPM (max.)	Torque (g-cm)	Terminal Type	Shaft Dia.	Shaft Length	Size (D" x L")	Pricing 1	Pricing 10	Pricing 100
154915CP	ST-130-12240[1]	Star Motor	3	1.5-3	0.070	5200	4.0	.09"/solder	0.08"	0.32"	0.79 x 1.13	$1.25	$1.15	$1.05
154923CP	ST-130-22770[1]	Star Motor	3	1.5-3	0.240	16000	8.3	.09"/solder	0.08"	0.32"	0.79 x 1.13	.95	.89	.79
177498CP	RC280RA-2485	Mabuchi Motor	4.5	3-14	0.150	10300	33.3	11"/solder	0.08"	0.43"	0.95 x 1.20	1.75	1.55	1.39
181411CP	HC685G-61810	Johnson Electric	5.0	3-14	0.470	10000	18.8	.187"/solder	0.13"	0.54"	1.40 x 1.98	3.15	2.39	1.69
192807CP	RF500TB	Mabuchi Motor	6.0	1.5-9	0.028	3700	14.5	.08"/solder	0.08"	0.35"	1.25 x 0.76	1.75	1.30	.90
153656CP	RS550PF[2]	Mabuchi Motor	12	6-15	1.400	6500	44.1	.15"/solder	0.13"	0.66"	1.45 x 2.25	2.95	2.49	2.25
174991CP	6424CL09WB20	NMB	10	8-12	0.430	4100	—	8" wires	0.12"	0.64"	1.62 x 0.64	1.85	1.65	1.49
181112CP	M25N-2	Mitsumi	12	5-15	0.018	3000	18	11"/solder	0.08"	0.26"	0.97 x 1.30	1.95	1.45	1.05
174692CP	21226-384221	Johnson Electric	12	9-14	0.015	3000	—	.11"/solder	0.08"	0.69"	0.97 x 1.19	1.65	1.49	1.35
162579CP	TID20E	Operating Tech T&I	12	9-14	0.025	2150	—	.20"/solder	0.12"	0.48"	1.48 x 1.42	1.49	1.10	.79
206949CP	QJT360S14280	Nichibo	12	9-30	0.350	4930	44.5	.11"/solder	0.09"	0.45"	1.09 x 1.30	1.95	1.75	1.59
181964CP	NF203G12	Johnson Electric	12	9-14	0.030	5000	—	.07"/solder	0.08"	0.57"	0.95 x 1.20	1.49	1.15	.78
173681CP	HC610F[3]	Johnson Electric	12	9-14	0.950	6600	20.0	.187"/fast on	0.12"	0.92"	1.40 x 1.80	1.95	1.49	1.05
190035CP	HC685L	Johnson Electric	15	7.2-24	0.720	7800	23.2	.187"/solder	0.13"	0.38"	1.47 x 2.25	1.75	1.29	.89
161082CP	84055	Johnson Electric	150	145-152	0.168	6500	305.9	.187"/fast on	0.16"	0.55"	2.48 x 1.51	1.45	1.29	1.19

[1] **154915CP/154923CP:** Use bushing P/N 162392CP, pg 190   [2] Manufacturer may vary   [3] **173681CP:** Eccentric gear

Vibrating Motors

1.3VDC 8,500 RPM Vibrating Motor

• Typical applications: cellular phones, pagers, and toys
• Rated RPM: 8,500 @ 1.3VDC
• Direction of rotation: clockwise
• Operating voltage: 1.3V @ 65mA (typical)
• Lead length: 0.75"
• Size: (motor) 0.16"Dia. x 0.55"L (shaft) 0.15"Dia. x 0.23"L

Part No.	Description	1	10	100
175396CP	Vibrating motor	$6.49	$5.89	$5.29

3VDC 4,500 RPM Vibrating Motor

• Typical applications: beepers, small toys, cellular phones
• Rated RPM: 4,500 or more @ 3VDC
• Direction of rotation: dual
• Operating voltage: 3VDC @ 45mA
• Operating voltage range: 2.5 – 3.8VDC
• Starting current @ operating voltage: 60mA or less
• Size: 0.55"Dia. x 0.13"Thick

Part No.	Description	1	10	100
185228CP	Vibrating motor	$3.35	$2.99	$2.69

Electric Motors and Control Techniques

SALE

TAB Publishing

Explains how different types of motors operate, and how electronic control devices can be used to improve efficiency in a wide range of applications. (294 pages, 1994)

• Size: 7.3" x 9.2"   • Weight: 1.1 lbs.

Part No.	Description	1	10
137162CP	Electric Motors & Control ...	$16.99	$15.29

Namiki 1.3VDC 7,500 RPM Vibrating Motor

• Typical applications: cellular phones, pagers and toys
• Rated RPM: 7,500 @ 1.3VDC
• Clock-wise rotation
• 1.1" lead wires
• Operating voltage: 1.3VDC @ 80mA
• Size: (motor) 0.47"L x 0.24"Dia. (shaft) 0.22"L x 0.10"Dia.

Part No.	Description	1	10	100
190078CP	Vibrating motor	$5.95	$5.35	$4.79

1.3VDC 7,000 RPM Vibrating Motor

• Typical applications: cellular phones, pagers, and toys
• Rated RPM: 7,000 @ 1.3VDC
• Lead length: 0.7"
• Stall current: 112mA @ 1.3VDC
• Direction of rotation: clockwise
• Operating voltage: 1.3VDC @ 62mA
• Operating voltage range: 0.7 – 1.6VDC
• Size: (motor) 0.28"Dia. x 0.67"L (shaft) 0.10"Dia. x 0.18"L

Part No.	Description	1	10	100
175062CP	Vibrating motor	$4.95	$4.49	$3.95

See page 193 for our selection of Motor Kits.

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Phone 1-800-831-4242   Fax 1-800-237-6948   Online www.Jameco.com

12 and 24VDC Reversible Gear Head Motors

HSIANG NENG

- Solder-type terminal
- High torque construction
- Oil bearing design for long service life
- Insulation resistance: 10MΩ
- Dielectric strength: 300VDC

167038CP **159417CP** **155011CP** HN27GD Series GH30GM Series GH35GM Series

HN27GD Series

Part Number	Product Number	Rated Voltage (VDC)	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	Pricing 10	Pricing 50
167038CP	GH12-0953Y	12	4.5 – 24	45	14	1.2	188:1	1.0 x 0.9	1.1 x 1.0	.16 x .60	$16.49	$14.85	$13.39
167046CP	GH12-1828Y	12	4.5 – 24	95	37	1.3	90:1	1.1 x 1.3	1.1 x 0.8	.16 x .60	21.95	19.79	17.79

GH30GM Series
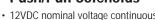
Part Number	Product Number	Rated Voltage (VDC)	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	Pricing 10	Pricing 50
170641CP	GH12-1828Y-10	12	6.0 – 24	45	10	3.5	332:1	1.2 x 1.2	1.2 x 0.9	.16 x .70	$23.95	$21.59	$19.49
153437CP	GH12-1045Y	12	3.0 – 12	35	15	0.8	200:1	0.9 x 1.0	1.1 x 0.6	.16 x .70	18.95	17.09	15.35
159417CP	GH12-1921Y	12	4.5 – 12	150	42	8	132:1	1.2 x 1.2	1.2 x 0.9	.16 x .70	21.95	19.79	17.79
162190CP	GH12-1324Y225	12	4.5 – 12	65	225	0.7	30:1	1.0 x 0.9	1.1 x 0.6	.16 x .70	16.95	15.25	13.75

GH35GM Series

Part Number	Product Number	Rated Voltage (VDC)	Operating Range (VDC)	No Load Current (mA)	No Load Speed (rpm)	Started Torque (kg-cm)	Gear Ratio	Gear Size Dia. x Lgth (in.)	Motor Size Dia. x Lgth (in.)	Shaft Size Dia. x Lgth (in.)	Pricing 1	Pricing 10	Pricing 50
155011CP	GH12-1926	12	4.5 – 12	55	2	15	3000:1	1.3 x 0.9	1.5 x 1.1	.23 x .90	$21.95	$19.79	$17.79
155820CP	GH12-1830Y-P	12	4.5 – 12	50	4.5	13	1000:1	1.3 x 0.9	1.5 x 1.0	.23 x .90	21.95	19.79	17.79
155838CP	GH12-1641T-L	12	3.0 – 12	65	20	10	270:1	1.3 x 0.9	1.5 x 0.8	.23 x .90	21.95	19.79	17.79
152910CP	GH12-1926Y	12	4.5 – 12	48	44	11.8	100:1	1.3 x 1.0	1.5 x 0.7	.24 x .90	21.95	19.75	17.75
151440CP	GH12-1632TI	12	4.5 – 12	75	69	11	100:1	1.3 x 0.9	1.5 x 0.7	.23 x .90	21.95	18.55	16.69
155854CP	GH12-1641T-F	12	3.0 – 12	65	87	7	60:1	1.3 x 0.9	1.4 x 0.9	.23 x .90	21.95	19.79	17.79
155862CP	GH12-1926Y-F	12	4.5 – 12	60	100	5	60:1	1.3 x 0.9	1.4 x 0.9	.23 x .90	21.95	19.79	17.79
161373CP	GH12-1345T	12	4.5 – 12	69	150	3	30:1	1.3 x 0.9	1.5 x 0.7	.23 x .90	21.95	19.79	17.79
161381CP	GH12-1634T	12	4.5 – 12	111	200	3.6	30:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.79
164785CP	GH12-1640Y	12	4.5 – 24	45	300	0.8	10:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	23.95	21.59	19.45
176049CP	GH12-1640Y00	24	12 – 24	140	2	6	3000:1	1.3 x 0.9	1.5 x 1.1	.23 x .90	22.95	17.25	13.85
176031CP	GH24-1640Y06	24	12 – 24	140	65	2	90:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.79
176022CP	GH24-1640Y19	24	12 – 24	140	193	1.0	30:1	1.3 x 0.9	1.4 x 0.7	.23 x .90	21.95	19.79	17.79

Solenoids and AC Gear Motor

12VDC Continuous Tubular Push, Pull and Push/Pull Solenoids

- 12VDC nominal voltage continuous
- Life expectancy: 2,000,000 cycles

163803CP **49761CP** **145314CP** **142463CP**

SUN MAGNET

Part No.	Type	Coil Res. (±10%)	Power Consum.	Holding Force (lbs. @ 20°C)	Wires (in.)	Size (ins.) (L x Dia.)	Shaft Dia. (in.)	Wt. (lbs.)	Pricing 1	Pricing 10	Pricing 100
163803CP	Push*	42.8Ω	3.4W	0.75	9.0	2.00 x .60	0.156	0.10	$6.95	$6.29	$5.65
149753CP	Push	36Ω	4.0W	0.75	7.0	1.90 x .50	0.063	0.05	9.95	8.95	7.95
149761CP	Push	20.7Ω	7.0W	1.50	7.0	2.50 x .60	0.098	0.10	9.95	8.95	7.95
145314CP	Push/Pull	89Ω	2.0W	1.12	3.5	1.24 x .73	0.110	0.05	8.95	7.95	6.95
142463CP	Pull	36Ω	4.0W	0.63	2.0	1.63 x .43	0.150	0.04	5.95	5.35	4.79

* Guardian Mfr. # (A420-067074-1)

120VAC Gear Motor

6.0 RPM - 2.9 Watt

- Operating Voltage: 120VAC @ 60Hz
- Torque: >3.57 kg-cm
- Connector: 12" wires
- Screw down tabs for mounting (2.3" diagonal mounting hole space)
- Shaft diameter: 0.27"   • Shaft length: 0.65"
- Typical applications: air conditioner turnleaf motor, microwave turnplate motor
- Overall size: 2.0" Dia. x 1.0" Thick

Part No.	Prod. No.	Description	1	10	100
213487CP	50TYZ	Gear motor	$19.95	$17.95	$16.25

Shindengen 24VDC Continuous Tubular Pull Solenoid

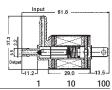- Holding force: 3 lbs.
- Typical coil resistance: 131Ω
- Power: 8 watts
- 2" lead wires
- Size: 3.1"L x 1.0"Dia.
- Weight: 2.8 lbs.

Part No.	Description	1	10	100
128557CP	24VDC solenoid	$8.49	$7.65	$6.89

12VDC Solenoid Valve

- Operating voltage: 12VDC
- Operational temperature: -29°C to 85°C
- Current: 350mA
- Air leakage: 1c.c./min. max. 4psi
- 0.250" quick disconnect terminals
- Size: 1.2"L x 0.92"Dia
- Weight: 0.1 lbs.

Input 61.8 37.3 2.2 -11.2- 29.0 -13.5- Output

Part No.	Description	1	10	100
169834CP	Solenoid valve	$6.95	$6.25	$5.59

24VDC Tubular Pull Solenoid

SUN MAGNET

- Holding force: 4.0 lbs. @ 20°C
- Typical coil resistance: 60Ω
- 1" stroke
- Power: 10 watts
- 9" lead wires
- Size: 3.0"L x 1.0" Dia.   • Weight: 0.4 lbs.

Part No.	Description	1	10	100
215141CP	24VDC pull soleniod	$9.95	$8.95	$7.95

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Color Code Legend New Sale Qty. Save

See page 79 for Surface Mount ICs.

Color Code Legend
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EPROM — Dual-In-Line

Part No.	Cross Ref.	Pins	Description			1	10	100
39909CP	2708	24	1k x 8	8kB	450ns (±5V, +12V)	$4.95	$3.75	$2.65
33611CP	TMS2716	24	2k x 8	16kB	450ns (±5V, +12V)	2.25	1.99	1.79
40002CP	2716	24	2k x 8	16kB	450ns (25V)	3.99	3.59	3.19
40011CP	2716-1	24	2k x 8	16kB	350ns (25V)	6.49	5.89	5.39
39706CP	27C16	24	2k x 8	16kB	450ns (25V) CMOS	7.25	6.55	5.99
114876CP	2732B	24	4k x 8	32kB	450ns (12.5V)	4.15	3.75	3.39
33591CP	TMS2532A	24	4k x 8	32kB	450ns (21V)	3.95	3.55	3.19
40096CP	2732	24	4k x 8	32kB	450ns (25V)	6.49	4.89	3.45
40109CP	2732A-20	24	4k x 8	32kB	200ns (21V)	6.49	5.99	5.49
40125CP	2732A-25	24	4k x 8	32kB	250ns (21V)	4.99	4.49	3.99
40133CP	2732A-45	24	4k x 8	32kB	450ns (21V)	3.99	3.69	3.29
39765CP	27C32	24	4k x 8	32kB	450ns (25V) CMOS	5.49	4.15	2.89
40192CP	2764-20	28	8k x 8	64kB	200ns (21V)	5.25	3.95	2.79
40205CP	2764-25	28	8k x 8	64kB	250ns (21V)	5.25	4.75	4.25
40230CP	2764A-20	28	8k x 8	64kB	200ns (12.5V)	4.49	3.39	2.39
40248CP	2764A-25	28	8k x 8	64kB	250ns (12.5V)	3.49	3.15	2.85
105304CP	27C64-12	28	8k x 8	64kB	120ns (12.5V) CMOS	6.49	5.99	5.49
39829CP	27C64-15	28	8k x 8	64kB	150ns (12.5V) CMOS	5.49	4.99	4.49
74608CP	27C64-20	28	8k x 8	64kB	200ns (12.5V) CMOS	4.69	4.29	3.79
39845CP	27C64-25	28	8k x 8	64kB	250ns (12.5V) CMOS	4.49	4.09	3.79
39933CP	27128-25	28	16k x 8	128kB	250ns (21V)	5.95	4.49	3.15
39950CP	27128A-15	28	16k x 8	128kB	150ns (12.5V)	4.49	3.95	3.55
39968CP	27128A-20	28	16k x 8	128kB	200ns (12.5V)	4.69	4.19	3.79
39984CP	27128A-25	28	16k x 8	128kB	250ns (12.5V)	4.49	4.05	3.69
87935CP	27C128-12	28	16k x 8	128kB	120ns (12.5V) CMOS	4.49	3.99	3.59
39677CP	27C128-15	28	16k x 8	128kB	150ns (12.5V) CMOS	4.29	3.85	3.45
101101CP	27C128-20	28	16k x 8	128kB	200ns (12.5V) CMOS	3.99	3.69	3.29
39685CP	27C128-25	28	16k x 8	128kB	250ns (12.5V) CMOS	3.99	3.59	3.25
40037CP	27256-15	28	32k x 8	256kB	150ns (12.5V)	3.25	3.09	2.75
40045CP	27256-20	28	32k x 8	256kB	200ns (12.5V)	3.15	3.05	2.75
40061CP	27256-25	28	32k x 8	256kB	250ns (12.5V)	3.15	2.95	2.65
140476CP	27C256-70	28	32k x 8	256kB	70ns (12.5V) CMOS	3.59	3.39	3.09
112740CP	27C256-10	28	32k x 8	256kB	100ns (12.5V) CMOS	3.35	3.15	2.85
65904CP	27C256-12	28	32k x 8	256kB	120ns (12.5V) CMOS	3.25	3.15	2.79
39714CP	27C256-15	28	32k x 8	256kB	150ns (12.5V) CMOS	3.25	3.09	2.75
39722CP	27C256-20	28	32k x 8	256kB	200ns (12.5V) CMOS	3.15	3.05	2.75
39731CP	27C256-25	28	32k x 8	256kB	250ns (12.5V) CMOS	3.15	2.95	2.65
40150CP	27512-20	28	64k x 8	512kB	200ns (12.5V)	2.75	2.45	2.25
40168CP	27512-25	28	64k x 8	512kB	250ns (12.5V)	2.55	2.35	2.14
203617CP	27C512-45	28	64k x 8	512kB	45ns (12.5V) CMOS	3.99	3.68	3.37
203625CP	27C512-70	28	64k x 8	512kB	70ns (12.5V) CMOS	3.69	3.49	3.15
175206CP	27C512-90	28	64k x 8	512kB	90ns (12.5V) CMOS	3.45	3.25	2.95
203730CP	27C512-10 PLCC	32	64k x 8	512kB	100ns (12.5V) CMOS	2.25	2.10	1.89
131959CP	27C512-10	28	64k x 8	512kB	100ns (12.5V) CMOS	3.39	3.15	2.85
39773CP	27C512-12	28	64k x 8	512kB	120ns (12.5V) CMOS	3.35	3.15	2.79
203692CP	27C512-12 OTP	28	64k x 8	512kB	120ns (12.5V) CMOS	2.25	1.89	1.79
39781CP	27C512-15	28	64k x 8	512kB	150ns (12.5V) CMOS	3.25	3.05	2.75
39790CP	27C512-20	28	64k x 8	512kB	200ns (12.5V) CMOS	3.15	2.95	2.65
39802CP	27C512-25	28	64k x 8	512kB	250ns (12.5V) CMOS	3.05	2.95	2.65
203633CP	27C1024-80	40	64k x 16	1024kB	80ns (12.5V) CMOS	6.65	6.15	5.55
203641CP	27C1024-12	40	64k x 16	1024kB	120ns (12.5V) CMOS	6.05	5.65	5.15
118148CP	27C1024-15	40	64k x 16	1024kB	150ns (12.5V) CMOS	5.95	5.55	4.99
137701CP	27C010-45	32	128k x 8	1024kB	45ns (12.5V) CMOS	6.09	5.49	4.99
146149CP	27C010-70	32	128k x 8	1024kB	70ns (12.5V) CMOS	5.55	5.15	4.69
137699CP	27C010-80	32	128k x 8	1024kB	80ns (12.5V) CMOS	5.12	4.61	4.09
203705CP	27C010-10 OTP	32	128k x 8	1024kB	100ns (12.5V) CMOS	2.55	2.35	2.15
203748CP	27C010-10 PLCC	32	128k x 8	1024kB	100ns (12.5V) CMOS	2.55	2.35	2.15
79231CP	27C010-10	32	128k x 8	1024kB	100ns (12.5V) CMOS	4.09	3.58	3.17
74624CP	27C010-12	32	128k x 8	1024kB	120ns (12.5V) CMOS	3.89	3.68	3.38
39651CP	27C010-15	32	128k x 8	1024kB	150ns (12.5V) CMOS	3.89	3.68	3.38
39669CP	27C010-20	32	128k x 8	1024kB	200ns (12.5V) CMOS	3.89	3.68	3.38
203650CP	27C020-80	32	256k x 8	2048kB	80ns (12.5V) CMOS	7.17	6.41	5.80
203713CP	27C020-10 OTP	32	256k x 8	2048kB	100ns (12.5V) CMOS	4.15	3.80	3.45
203756CP	27C020-10 PLCC	32	256k x 8	2048kB	100ns (12.5V) CMOS	3.99	3.75	3.49
156267CP	27C020-10	32	256k x 8	2048kB	100ns (12.5V) CMOS	5.63	5.22	4.71
78852CP	27C020-12	32	256k x 8	2048kB	120ns (12.5V) CMOS	5.63	5.22	4.71
65699CP	27C020-15	32	256k x 8	2048kB	150ns (12.5V) CMOS	5.63	5.22	4.71
65681CP	27C020-20	32	256k x 8	2048kB	200ns (12.5V) CMOS	5.63	5.22	4.71
127933CP	27C4096-12	40	256k x 16	4096kB	120ns (12.5V) CMOS	9.22	8.60	7.85

EPROM (Continued) — Dual-In-Line

Part No.	Cross Ref.	Pins	Description			1	10	100
203676CP	27C040-80	32	512k x 8	4096kB	80ns (12.5V) CMOS	$12.29	$11.27	$10.24
203764CP	27C040-10 PLCC	32	512k x 8	4096kB	100ns (12.5V) CMOS	5.99	5.59	5.20
111780CP	27C040-10	32	512k x 8	4096kB	100ns (12.5V) CMOS	6.92	6.41	5.90
203721CP	27C040-12 OTP	32	512k x 8	4096kB	120ns (12.5V) CMOS	6.75	6.40	5.85
102293CP	27C040-12	32	512k x 8	4096kB	120ns (12.5V) CMOS	6.92	6.41	5.90
85462CP	27C040-15	32	512k x 8	4096kB	150ns (12.5V) CMOS	6.92	6.41	5.90
203668CP	27C040-45	32	512k x 8	4096kB	45ns (12.5V) CMOS	13.32	12.29	11.27
203684CP	27C080-90	32	1M x 8	8192kB	90ns (12.5V) CMOS	12.91	11.99	10.96
156275CP	27C080-10	32	1M x 8	8192kB	100ns (12.5V) CMOS	12.91	11.99	10.96
140003CP	27C080-12	32	1M x 8	8192kB	120ns (12.5V) CMOS	12.91	11.99	10.96
156283CP	27C160-10	42	2M x 8	16384kB	100ns (12.5V) CMOS	20.45	18.95	17.31

See EPROM programmers and erasers on page 113

EPROM Accessories

Part No.	Cross Ref.	Description	1	10
206922CP	EP1D	1.1" x 0.46" EPROM & DIP window labels UV opaque, accepts ink or pencil (168 labels per pack)	$6.95	$5.95
13864CP	CF2	Conductive foam (12" x 24" x .25") hard black	7.95	6.95
66042CP	DE1	UVP portable EPROM eraser, pg 113	64.95	58.95
15712CP	DE4	8-chip UV-EPROM eraser, pg 113	109.95	104.95

EEPROM — Dual-In-Line

Part No.	Cross Ref.	Pins	Description		1	10	100
108839CP	24C02P	8	256 x 8	2048-bit serial (CMOS)	$.79	$.69	$.62
108847CP	24C04P	8	512 x 8	4096-bit serial (CMOS)	.89	.79	.69
200547CP	24C08-10	8	1k x 8	1024-bit serial (CMOS)	.99	.89	.80
200555CP	24C16-10	8	2k x 8	16k serial (CMOS)	1.19	1.09	.95
200563CP	24C32-10	8	4k x 8	32k serial (CMOS)	1.75	1.69	1.45
200627CP	24C44	8	16 x 16	256-bit serial (CMOS)	2.49	1.79	1.55
200619CP	24C65	8	8k x 8	64k serial (CMOS)	1.89	1.69	1.49
200571CP	24C128-10	8	16k x 8	128k serial (CMOS)	3.75	3.10	2.79
200580CP	24C256-10	8	32k x 8	256k serial (CMOS)	3.59	2.35	2.15
74691CP	28C16A-25	24	2k x 8	16k 250ns (5V) CMOS	3.99	3.69	3.39
40416CP	2817A-25	28	2k x 8	16k 250ns 5V read/write	7.95	7.15	6.49
74827CP	28C64A-25	28	8k x 8	64k 250ns (5V) CMOS	4.49	4.05	3.65
40475CP	2865A	28	8k x 8	64k 250ns 5V read/write	4.95	4.49	4.05
74843CP	28C256-15	28	32k x 8	256k 150ns CMOS	8.95	6.95	6.25
74878CP	28C256-25	28	32k x 8	256k 250ns CMOS	8.75	6.85	6.05
102058CP	93C46	8	64 x 16	1024-bit serial (5V)	.59	.49	.45
108855CP	93C56	8	128 x 16	2048-bit serial (5V)	.69	.59	.49
200598CP	93C66	8	256 x 16	4096-bit serial (5V)	.69	.62	.55
200601CP	93C86	8	1k x 16	16k serial (5V)	1.39	1.25	1.15

PROM — Dual-In-Line

Part No.	Cross Ref.	Pins	Description		1	10	100
48531CP	74S188	16	32 x 8	Open collector (27S18)	$4.95	$4.45	$3.99
48696CP	74S287	16	256 x 4	Tri-state (TBP24S10N)	6.95	6.25	5.65
48717CP	74S288	16	32 x 8	Tri-state (27S19/TBP18S030N)	4.95	3.75	2.65
48805CP	74S387	16	256 x 4	Open collector (TBP24SA10N)	4.29	3.89	3.59
48864CP	74S472	20	512 x 8	Tri-state high speed (MB7124)	8.95	7.95	6.95
48910CP	74S571	16	512 x 4	Tri-state (27S13)	5.99	5.69	5.39
48928CP	74S573	18	1024 x 4	Tri-state (27S33)	3.05	2.73	2.46
27844CP	N82S23	16	32 x 8	256-bit PROM (OC) (27S18)	5.95	4.49	3.15
27748CP	N82S100	28	16 x 48 x 8	Field-prog. logic array, tri-state	14.95	13.49	12.15
27764CP	N82S123	16	32 x 8	256-bit PROM tri-state (27S19)	5.95	5.35	4.85
27772CP	N82S126	16	256 x 4	1024-bit PROM (OC) (27S20)	6.95	6.25	5.25
27781CP	N82S129	16	256 x 4	1024-bit PROM tri-state (27S21)	7.95	6.95	6.25
27799CP	N82S131	16	512 x 4	2048-bit PROM tri-state (27S13)	7.99	6.99	5.99
27801CP	N82S137	18	1024 x 4	4096-bit PROM tri-state (27S33)	4.95	3.75	2.65
27810CP	N82S181	24	1024 x 8	8192-bit bipolar PROM tri-state	6.95	5.95	5.39
27828CP	N82S185	18	2048 x 4	8192-bit PROM tri-state	5.45	4.09	2.89
27836CP	N82S191	24	2048 x 8	16,384-bit PROM tri-state	6.95	6.25	5.65

Flash Memory — Dual-In-Line

Part No.	Cross Ref.	Pins	Description		1	10	50
74771CP	28F010-15	32	128k x 8	150ns (12V) CMOS	$6.95	$6.25	$5.65
74835CP	28F020-15	32	256k x 8	150ns (12V) CMOS	7.95	7.15	6.45

See page 79 for Surface Mount ICs.

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**

Dynamic and Video RAM
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
41339CP	4116-15	16	16k x 1 150ns (MM5290J-1R)	$.99	$.89	$.80
191370CP	HM4816-4	16	16k x 1 120ns	.61	.56	.50
41662CP	4164-150	16	64k x 1 150ns (MCM6665-15)	.59	.53	.48
41398CP	41256-120	16	256k x 1 120ns (MB81256-12)	.73	.65	.59
41427CP	41256-150	16	256k x 1 150ns (P21256-15)	.69	.59	.49
41574CP	41464-10	18	64k x 4 100ns (HY53C464S-10)	1.69	1.65	1.59
41582CP	41464-12	18	64k x 4 120ns (MB81464-12)	1.39	1.25	1.09
42219CP	511000P-10	18	1M x 1 100ns (M5M4C1000-10)	2.25	1.99	1.79
93374CP	514256P-70	20	256k x 4 70ns (TC514256P-70)	2.79	2.49	2.19
42315CP	514256P-80	20	256k x 4 80ns (UPD424256-80)	2.49	2.25	2.05
128688CP	HM514260	SOJ	256k x 16 70ns	3.39	2.99	2.69

Static RAM
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
38738CP	2016-12	24	2k x 8 120ns (AM9128-12)	$1.49	$1.29	$1.22
38746CP	2016-20	24	2k x 8 200ns (MB8128-20)	1.39	1.09	.78
38931CP	2111-1	18	256 x 4 500ns (AM9111APC)	1.95	1.75	1.59
38957CP	2114N	18	1k x 4 450ns (9114BPC)	2.25	1.99	1.79
38973CP	2114N-2	18	1k x 4 200ns (9114EPC) (U214D20)	2.49	2.25	2.05
38981CP	2114N-2L	18	1k x 4 200ns low power	2.49	2.25	2.05
25911CP	MK48Z02B-15	24	2k x 8 150ns (16k) zero-power RAM	9.99	8.99	7.99
42198CP	5101	22	256 x 4 450ns (CMOS)	7.99	7.19	6.49
42788CP	6116P-1	24	2k x 8 100ns (16kB) CMOS	1.69	1.29	.89
42796CP	6116P-2	24	2k x 8 120ns (16kB) CMOS	1.59	1.19	.83
42809CP	6116P-3	24	2k x 8 150ns (16kB) CMOS	1.49	1.29	1.15
42737CP	6116LP-1	24	2k x 8 100ns (16kB) LP CMOS	2.39	1.79	1.25
42753CP	6116LP-3	24	2k x 8 150ns (16kB) LP CMOS	1.95	1.49	1.05
42921CP	6264P-10	28	8k x 8 100ns (64kB) CMOS	2.59	2.29	1.99
42930CP	6264P-12	28	8k x 8 120ns (64kB) CMOS	2.65	2.39	2.15
85121CP	6264LP-70	28	8k x 8 70ns (64kB) LP CMOS	3.39	2.99	2.69
42884CP	6264LP-10	28	8k x 8 100ns (64kB) LP CMOS	2.75	2.49	2.25
42892CP	6264LP-12	28	8k x 8 120ns (64kB) LP CMOS	2.79	2.49	2.19
43238CP	6514	18	1k x 4 350ns CMOS (M58981P)	2.95	2.75	2.49
41970CP	43256-10L	28	32k x 8 100ns low power (NEC)	5.49	4.95	4.45
41988CP	43256-12L	28	32k x 8 120ns low power (NEC)	4.95	3.75	2.65
82472CP	62256LP-70	28	32k x 8 70ns low power CMOS	5.49	4.99	4.49
42833CP	62256LP-10	28	32k x 8 100ns low power CMOS	4.35	3.95	3.55
42850CP	62256LP-12	28	32k x 8 120ns low power CMOS	3.85	3.49	3.15
75037CP	ATT7C199P-15	28	32k x 8 15ns high speed CMOS (.3"W)	3.39	2.99	2.69
172101CP	6285128LP-50	32	128k x 8 50ns low power CMOS	10.99	9.99	8.99
131810CP	628128LP-70	32	128k x 8 70ns low power CMOS	8.95	7.79	6.99
103982CP	628128LP-85	32	128k x 8 85ns low power CMOS	8.49	7.49	6.75
157358CP	628512LP-70	32	512k x 8 70ns low power CMOS	19.99	17.99	16.19

Voice Chips
Dual-In-Line

Single-Chip Voice Record/Playback Devices
10 to 240 Second Durations (28-pin DIP)

- Easy-to-use single-chip voice recording and playback
- Manual switch or microprocessor controllable
- Directly cascadable for longer durations
- Fully addressable to handle multiple messages
- Zero-power message storage – eliminates battery backup circuits
- Single voltage operation: +5V (4.5V to 5.5V operating range)
- Automatic power-down (push-button mode)
- Playback can be edge or level-activated • On-chip clock source
- 1 µA standby current (typical) • 100k record cycles (typical)
- 100-year message retention (typical) • On-chip automatic gain control (AGC)

107334CP

Part No.	Product No.	Description	1	10	50
141671CP	ISD1110P	Voice record/playback (10 sec.)	$4.29	$3.99	$3.79
107334CP	ISD1420P	Voice record/playback (20 sec.)	5.39	5.09	4.89
120643CP	ISD2560	Voice record/playback (60 sec.)	8.99	8.49	7.99
120660CP	ISD2590	Voice record/playback (90 sec.)	8.99	8.49	7.99
141655CP	ISD25120P	Voice record/playback (120 sec.)	8.99	8.49	7.99

See page 155 for CPU Heat Sinks, Fans and Accessories

CPUs/MPUs

Part No.	Description	MHz	Socket	1	10	25
196630CP	Pentium® 4 processor	1.7GHz	Socket 423	$279.95	$259.95	$233.95
196621CP	Pentium® 4 processor	1.6GHz	Socket 423	249.95	229.95	206.95
196613CP	Pentium® 4 processor	1.5GHz	Socket 423	239.95	219.95	197.95
196605CP	Pentium® 4 processor	1.4GHz	Socket 423	179.95	159.95	143.95
196592CP	Pentium® 4 processor	1.3GHz	Socket 423	169.95	152.95	137.65
196584CP	Pentium® III processor	1.0GHz	Socket 370	219.95	199.95	179.95
196525CP	Pentium® III processor	1.0GHz	Slot 1	364.95	329.95	296.95
196576CP	Pentium® III processor	866	Socket 370	214.95	194.95	175.45
196517CP	Pentium® III processor	866	Slot 1	224.95	199.95	179.95
196568CP	Pentium® III processor	850	Socket 370	214.95	194.95	175.45
196509CP	Pentium® III processor	850	Slot 1	181.49	164.99	149.99
188912CP	Pentium® III processor	733	Socket 370	112.95	101.95	90.95
183134CP	Pentium® III processor	733	Slot 1	169.95	154.95	139.45
196541CP	Pentium® III processor	700	Socket 370	179.95	159.95	143.95
196496CP	Pentium® III processor	700	Slot 1	164.95	159.99	154.99
196533CP	Pentium® III processor	600	Socket 370	184.95	164.95	148.45
183118CP	Pentium® III processor	600	Slot 1	159.95	144.95	130.45
183100CP	Pentium® II processor	400	Slot 1	124.99	109.99	99.99
151651CP	Pentium® II processor	300	Slot 1	109.99	99.99	89.99
190060CP	Pentium® II processor w/ heat sink	233	Slot 1	89.95	79.95	72.95
150501CP	Pentium MMX® processor	233	376/PGA	69.95	62.95	54.95
140054CP	Pentium MMX® processor	200	376/PGA	49.95	37.45	26.25
196912CP	Pentium MMX® processor	166	296/PGA	39.95	35.95	32.49
196162CP	Pentium PRO® w/ heat sink & fan	200	387/PGA	59.95	44.95	31.49
189288CP	Pentium PRO® processor	150	387/PGA	16.05	14.59	13.29
189296CP	Pentium® processor	200	296/PGA	69.95	52.49	36.75
130841CP	Pentium® processor	166	296/PGA	54.99	41.25	28.89
130833CP	Pentium® processor	133	296/PGA	29.95	26.95	24.25
125495CP	Pentium® processor	100	296/PGA	9.85	8.95	8.15
200387CP	Celeron® processor	400	Socket 370	74.95	67.95	61.25
200408CP	Celeron® processor	366	Socket 370	69.95	62.95	56.55
189253CP	Athlon®, A0900AMT3B	900	Slot A	69.95	69.95	69.95
192751CP	Athlon®, A0750MPR24B	750	Slot A	129.95	97.49	68.25
192735CP	Athlon®, A0700MPR24B	700	Slot A	59.95	54.75	49.79
189270CP	486DX4 (Intel), FC80486DX4	75	208/SQFP	9.69	8.85	8.15
118421CP	486 speed doubler (Intel), 80486DX2	66	168/PGA	19.95	17.95	16.15
135571CP	486 speed doubler (SGS), ST486DX2	66	168/PGA	10.35	9.39	8.55
189261CP	486 overdrive processor, A80486SX	33	168/PGA	7.75	7.05	6.45

Math Coprocessors

Part No.	Cross Ref.	Pins	Description	1	10	25
51941CP	80387-33	68PGA	33MHz math coprocessors	$15.95	$12.95	$11.65
76531CP	80387-25SX	68PLCC	25MHz math coprocessors	27.95	24.95	22.45

V20 Chip
Dual-In-Line

Part No.	Cross Ref.	Pins	MHz	Description	1	10	100
34358CP	UPD70108-8	40	8	V20 chip (replaces the 8088-2)	$10.99	$9.99	$8.99

Z80 Series
Dual-In-Line

Part No.	Cross Ref.	Pins	MHz	Description	1	10	100
35561CP	Z80	40	2.5	CPU (MK3880N/780C)	$1.39	$1.19	$1.09
35596CP	Z80A	40	4	CPU (MK3880N-4/780C-1)	1.99	1.79	1.59
35609CP	Z80A-CTC	28	4	Counter timer circuit (MK3882-4)	2.19	1.75	1.35
35625CP	Z80A-DART	40	4	Dual asynchronous receiver/transmitter	3.49	3.19	2.89
35641CP	Z80A-PIO	40	4	Parallel I/O interf. contr. (MK3881-4)	1.49	1.15	.78
35668CP	Z80A-SIO/0	40	4	Serial I/O (TxCB & RxCB bond.) MK3884-4	2.19	1.95	1.75
35705CP	Z80B	40	6	CPU (MK3880N-6)	2.59	2.35	2.09
35781CP	Z84C00-4	40	4	CPU (Z84C0004PEC) CMOS	4.75	3.63	2.49
35799CP	Z8530	40	2	Serial communications controller	2.49	1.75	1.25
185332CP	Z8681	40	2	ROMless MCU	.55	.50	.45

UARTs
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43158CP	6402	40	CMOS/LSI UART (TR1863)	$4.95	$4.49	$4.05
27570CP	NS16C450N	40	CMOS ACE (IBM-AT compat.) (82C450)	5.95	5.39	4.85
27596CP	NS16550AN	40	Univ. asynch. rcvr./trans. w/ FIFO (PC16550DN)	5.95	4.49	3.15

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**

6500 Series/Commodore — Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43191CP	6502	40	MPU with internal clock (1MHz)	$7.95	$6.95	$6.25
43166CP	65C02	40	MPU with internal clock (CMOS)	6.95	5.25	3.65
43254CP	6522	40	VIA (versatile interface adapter) 1MHz	2.39	2.15	1.94
43297CP	6532	40	128 x 8 RAM, I/O timer array	7.95	6.99	6.49
43318CP	6551	28	ACIA (asynch. comm. interface adptr)	3.95	3.49	3.15

6800/68000 Series — Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43481CP	6800	40	8-bit MCU	$6.95	$5.25	$3.65
43502CP	6802	40	8-bit MPU with clock and RAM (1MHz)	8.69	7.82	6.99
43529CP	6803	40	8-bit MCU with 128k RAM	7.79	6.99	6.29
43545CP	6809E	40	MPU with external clock (1MHz)	3.95	3.59	3.25
43561CP	6810	24	128x8 static RAM (1MHz)	1.49	1.35	1.19
43596CP	6821	40	Peripheral interface adapter (1MHz)	3.95	3.59	3.25
43414CP	68B21	40	Peripheral interface adapter (2MHz)	4.95	4.49	4.05
43617CP	6840	28	Programmable timer (1MHz)	2.49	2.25	1.99
43633CP	6850	24	Asynch. comm. int. adapter (ACIA)	2.39	2.09	1.89
25304CP	MC68000L8	64	MPU 16-bit (8MHz)	8.95	7.95	7.25
25291CP	MC68000L10	64	MPU 16-bit (10MHz)	14.95	11.20	7.85
25355CP	MC68701	40	8-bit EPROM MPU w/ 128B RAM & I/O	15.95	13.95	12.55
25363CP	MC68705P3S	28	8-bit EPROM MPU w/ 112B RAM & I/O	24.95	22.95	20.65
25371CP	MC68705U3S	40	8-bit EPROM MPU w/ 112B RAM & I/O	29.95	26.95	24.29
191863CP	MC68HC11E1CP2	48	8-bit micro cntl. w/ A/D conv. (512B RAM)	15.95	13.95	12.55
108919CP	MC68HC705C8P	40	8-bit HCMOS MCU, 8k OTPROM, 24 I/O lines	9.95	8.95	8.05
132484CP	MC68HC705C8S	40	8-bit HCMOS MCU, 8k bytes, EPROM	38.95	34.95	31.55
108927CP	MC68HC705K1P	16	8-bit HCMOS MCU, 504B, OTPROM, 10 I/O tmr	7.95	7.15	6.45

8000 Series — Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
51844CP	8031	40	CPU with 128 x 8 RAM and I/O	$3.29	$2.99	$2.69
51676CP	80C31	40	CPU with 128 x 8 RAM and I/O (CMOS)	3.39	2.55	1.79
102197CP	8032	40	8-bit MCU 256 x 8 RAM	3.95	3.59	3.25
108804CP	80C32-1	40	8-bit MCU 256 x 8 RAM (CMOS)	4.49	3.99	3.59
51861CP	8035	40	MPU 8-bit	3.95	3.59	3.25
51959CP	8039	40	CPU single chip 8-bit (128 bytes RAM)	4.49	3.99	3.59
51692CP	80C39	40	CPU single chip 8-bit (128 bytes RAM) CMOS	3.99	3.59	3.25
51983CP	8049*	40	CPU single chip 8-bit (can be used as 8039*)	1.95	1.75	1.59
51991CP	8051AP**	40	MCU w/128x8 RAM (book 161402CP, pg 185)	5.49	4.99	4.49
52003CP	8052AH**	40	CPU 8-bit 256 bytes RAM, timer/counter & I/O	7.95	7.19	6.49
125647CP	80C52BASIC	40	CPU 8-bit CMOS with basic interpreter	19.95	17.95	16.15
52046CP	8080A	40	CPU 8-bit N-channel (1MHz)	4.49	3.95	3.59
52062CP	8085A	40	CPU 8-bit N-channel (3MHz)	4.99	3.75	2.65
52071CP	8085A-2	40	CPU 8-bit N-channel (5MHz)	6.95	4.99	4.49
51705CP	80C85	40	CPU 8-bit N-channel (3MHz)(CMOS)	6.95	5.25	3.65
52100CP	8086-2	40	CPU 16-bit (8MHz)	1.95	1.75	1.59
52142CP	8088	40	CPU 16-bit (8-bit data bus) 5MHz	2.49	2.25	1.99
52169CP	8088-2	40	CPU 16-bit (8-bit data bus) 8MHz	5.95	5.39	4.85
52290CP	8155	40	HMOS RAM I/O port/timer (3MHz)	4.49	3.99	3.59
52302CP	8155-2	40	HMOS RAM I/O port/timer (5MHz)	5.95	5.39	4.85
52193CP	81C55	40	256x8 RAM I/O port/timer (CMOS) 3MHz	3.95	3.59	3.19
52329CP	8156	40	RAM with I/O port and timer	9.95	7.45	5.25
52468CP	8212	24	8-bit input/output (74S412)	6.49	5.99	5.49
52484CP	8216	16	Bi-directional bus driver (non-invert.)	3.95	2.89	2.02
52492CP	8224	16	Clock generator/driver	2.95	2.49	2.25
52513CP	8228	28	System contr./bus driver (74S428)	2.95	2.19	1.55
52581CP	8243	24	I/O expander for 48 series	5.49	4.99	4.49
52610CP	8250A	40	Asynchronous comm. element	4.95	3.75	2.65
52644CP	8251	28	Prog. comm. I/O (USART)	2.99	2.69	2.39
52652CP	8251A	28	Prog. comm. interface (USART)	3.99	3.69	3.39
52370CP	82C51A	28	Prog. comm. interface (USART) CMOS	4.49	3.99	3.49
52679CP	8253	24	Prog. interval timer	3.19	2.89	2.59
52687CP	8253-5	24	Prog. interval timer (2MHz)	4.99	4.49	3.99
52388CP	82C53-5	24	Prog. interval timer (CMOS) 2MHz	4.95	3.75	2.65
52708CP	8254	24	Prog. interval timer (UPD71054)	4.49	3.99	3.59
52716CP	8254-2	24	Prog. interval timer (10MHz)	7.35	6.65	5.95
52396CP	82C54	24	Prog. interval timer (CMOS)	3.95	2.95	2.07
52409CP	82C54-2	24	Prog. interval timer (CMOS) 10MHz	4.49	3.39	2.39

*8049 (ROM not available for use) Tie pin 7 high to bypass the internal ROM to convert 8049 to 8039
**Tie pin 31 low to bypass the internal ROM

8000 Series (Continued) — Dual-In-Line

✳ Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pins	Description	1	10	100
52724CP	8255	40	Prog. peripheral I/O (PPI) 71055 (2MHz)	$4.49	$3.99	$3.49
52732CP	8255A-5	40	Prog. peripheral I/O (PPI) 5MHz	4.89	4.39	2.89
52417CP	82C55A	40	Prog. peripheral I/O (PPI) CMOS	4.99	4.49	3.99
52425CP	82C55A-5	40	Prog. peripheral I/O (PPI) CMOS (5MHz)	4.49	3.99	3.49
52759CP	8256	40	Multif. universal asynch. rec./trans.	19.99	17.99	16.19
52775CP	8259	28	Prog. interrupt controller (UPD71059)	1.75	1.55	1.45
52783CP	8259-5	28	Prog. interrupt controller (8259A-2)	2.49	2.19	1.99
52821CP	8275	40	Prog. CRT controller	12.95	9.75	6.85
52839CP	8279	40	Prog. keyboard/display interface	12.99	11.99	10.99
52847CP	8279-5	40	Prog. keyboard/display interface (5MHz)	12.95	11.69	10.49
52855CP	8282	20	Octal latch (UPD71082)	6.49	4.89	3.45
52863CP	8283	20	Octal latch inverts input data at outputs	✳	.22	.20
52871CP	8284A	18	Clock gen. and driver (UPD71084)	4.49	3.99	3.59
52898CP	8286	20	Octal bus transceiver (UPD71086)	3.95	3.59	3.25
52901CP	8287	20	Octal bus transceiver (inverted)	10.95	8.25	5.75
52919CP	8288	20	Bus controller (UPD71088) 82C88-2	1.95	1.79	1.45
53006CP	8741	40	8-bit univ. peripheral interface (EPROM)	7.99	7.19	6.49
53014CP	8742	40	8-bit univ. peripheral interface	9.95	7.45	5.22
53022CP	8748	40	CPU 8-bit, EPROM, RAM and I/O (21V)	13.95	10.49	7.35
53031CP	8748H	40	CPU 8-bit, EPROM, RAM & I/O HMOS (21V)	15.95	14.49	12.99
53057CP	8749H	40	MPU 8-bit (EPROM version 8049)	22.99	19.99	17.95
53073CP	8751	40	CPU w/ 4kx8 EPROM & 128x8 RAM (3.5-8MHz)	19.99	17.99	16.19
53081CP	8751H	40	CPU w/ 4kx8 EPROM & 128x8 RAM (1.2-12MHz)	28.50	20.25	14.99
52978CP	87C51	40	CPU w/ 4kx8 EPROM & 128x8 RAM(3.5-12MHz)	21.99	16.49	11.55
196120CP	P87C51	40	CPU w/ 4kx8 EPROM & 128x8 RAM(3.5-12MHz)OTP	12.95	11.95	10.75
53090CP	8755	40	16k EPROM with I/O	8.95	8.09	7.29

MICROCHIP CMOS PIC Microcontrollers — Dual-In-Line

Part No.	Product No.	Pins	Conf.	Speed (MHz)	EPROM Bits	RAM Bytes	I/O Lines	1	10	100
145040CP	PIC12C508-04/P	8	OTP	4	512 x 12	25	5	$1.75	$1.49	$1.25
145058CP	PIC12C509/JW	8	EPROM	4	1k x 12	41	5	9.39	8.45	7.65
144258CP	PIC12C509-04/P	8	OTP	4	1k x 12	41	5	1.95	1.55	1.29
200475CP	PIC12CE518-04/P	8	OTP	4	512 x 12	25	6	1.79	1.59	1.49
200483CP	PIC12CE519-04/P	8	OTP	4	1k x 12	41	6	1.99	1.79	1.69
193455CP	PIC12C671-04/P	8	OTP	4	1k x 14	128	6	2.69	2.49	2.29
193463CP	PIC12C672-04/P	8	OTP	4	2k x 14	128	6	2.79	2.51	2.25
200459CP	PIC16C505-04/P	14	OTP	20	1k x 12	72	12	1.95	1.75	1.65
128338CP	PIC16C54A-04/P	18	OTP	4	512 x 12	25	12	3.29	2.69	2.49
200416CP	PIC16C55A-04/P	28	OTP	4	512 x 12	24	20	2.69	2.49	2.29
134172CP	PIC16C56-RC/P	18	OTP	20	1k x 12	25	12	3.75	3.49	3.25
134181CP	PIC16C57/JW	28	EPROM	20	2k x 12	72	20	13.95	12.95	11.95
213495CP	PIC16C57C/JW	28	EPROM	40	2k x 12	72	20	13.95	12.95	11.95
193341CP	PIC16C57C-04/P	28	OTP	4	2k x 12	72	20	3.19	2.89	2.69
193375CP	PIC16C58B-04/P	18	OTP	4	2k x 12	73	12	2.25	2.05	1.99
193383CP	PIC16C622A-04/P	18	OTP	4	2k x 14	128	13	3.09	2.78	2.50
193439CP	PIC16F627-20/P	18	Flash	20	1k x 14	224	16	3.39	3.05	2.74
193447CP	PIC16F628-20/P	18	Flash	20	2k x 14	224	16	3.25	2.92	2.63
193324CP	PIC16C63A-20/SP	28	OTP	20	4k x 14	192	22	5.49	4.99	4.79
200424CP	PIC16C66-04/P	28	OTP	4	8k x 14	368	33	7.75	6.89	6.19
193359CP	PIC16C711-04/P	18	OTP	4	1k x 14	68	13	3.59	2.19	1.99
200467CP	PIC16C715-04/P	18	OTP	4	2k x 14	128	13	4.49	4.09	3.79
200432CP	PIC16C72A-04/P	28	OTP	4	2k x 14	128	22	4.99	4.49	4.19
200441CP	PIC16C73A-04/P	28	OTP	4	4k x 14	192	22	8.99	8.39	7.89
193391CP	PIC16F73-I/SP	28	Flash	20	4k x 13	192	5	4.99	4.49	4.29
145091CP	PIC16C74A/JW	40	EPROM	20	14k x 14	192	33	19.95	18.99	17.99
193404CP	PIC16F74-I/P	40	Flash	20	4k x 14	192	8	6.49	5.84	5.25
193412CP	PIC16F76-I/P	28	Flash	20	8k x 14	368	5	7.29	6.89	6.49
193421CP	PIC16F77-I/P	40	Flash	20	8k x 14	368	8	8.19	7.37	6.63
145111CP	PIC16F84-04/P	18	Flash	4	1k x 14	68	13	5.95	5.35	4.75
145120CP	PIC16F84-10/P	18	Flash	10	1k x 14	68	13	6.85	6.51	6.19
193332CP	PIC16F84A-20/P	18	Flash	20	1k x 14	68	13	5.95	5.35	4.82
193367CP	PIC16F876-20/SP	28	Flash	20	256 x 8	368	22	8.19	7.37	6.63
176882CP	PIC16F877-20/P	40	Flash	20	256 x 8	368	33	9.49	8.49	7.49
200491CP	PIC18C242-I/SP	28	OTP	40	16k x 16	512	23	7.59	6.79	6.19
200504CP	PIC18C252-I/P	28	OTP	40	32k x 16	1536	23	8.20	7.28	6.55
200512CP	PIC18C452-I/P	40	OTP	40	32k x 16	1536	23	9.10	8.09	7.25
200521CP	PIC18C452/JW	40	EPROM	40	32k x 16	1536	23	21.95	20.85	19.65

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ATMEL AT89C Series — Dual-In-Line

Part No.	Product No.	Pins	Description	1	10	100
168866CP	AT89C1051-24PC	20	8-bit MCU, 24MHz 1kb flash memory	$3.39	$2.14	$1.95
168874CP	AT89C2051-24PC	20	8-bit MCU, 24MHz 2kb flash memory	3.59	2.39	2.15
204089CP	AT89C4051-24PC	20	8-bit MCU, 24MHz 4kb flash mem. 8-bit ..	4.49	2.95	2.65
168891CP	AT89C51-20PC	40	8-bit MCU, 20MHz 4kb flash memory	4.25	3.84	3.49
168903CP	AT89C51-24PC	40	8-bit MCU, 24MHz 4kb flash memory	4.49	3.99	3.59
168920CP	AT89C52-24PC	40	8-bit MCU, 24MHz 8kb flash memory	4.39	2.85	2.55
168938CP	AT89C52-24JC	44	8-bit MCU, 24MHz 8kb flash mem. PLCC	4.35	2.83	2.53
168946CP	AT89C55WD-24PC	40	8-bit MCU, 24MHz 20kb flash memory	7.99	7.19	6.49
204097CP	AT89S8252-24PC	40	8-bit MCU, 24MHz 8kb flash mem. 2kb EEPROM	6.75	4.49	3.95
204100CP	AT90S1200-12PC	20	20 AVR 8-bit RISC MCU, 12MHz 1kb prog. flash	2.95	1.95	1.75
204118CP	AT90S2323-10PC	8	8 AVR 8-bit RISC MCU, 10MHz 2kb prog. flash	3.49	2.19	1.95
204126CP	AT90S8515-8PC	40	40 AVR 8-bit RISC MCU, 8MHz 8kb prog. flash	7.95	5.49	4.95

Microcontrollers

80C52-BASIC Microcontroller

The 80C52-BASIC chip is a custom-masked 80C52 microcontroller with a full-featured 8k-byte ROM-resident BASIC-52 interpreter.

Hardware: • On-chip oscillator and clock circuit
• Operates DC to 12MHz • 256 x 8-bit RAM
Software: • Full BASIC interpreter in ROM on a single chip
• "Stand-alone" software development
• Interrupts can be handled by BASIC or Assembly Language

Part No.	Product No.	Description	1	10	100
125647CP	80C52BASIC	CPU 8-bit CMOS w/ BASIC interpreter	$19.95	$17.95	$16.15

PARALLAX 50MIPS SX Microcontroller

Part No.	Parallax No.	Description	1	10
162931CP	SX28AC/DP	28-pin DIP package	$5.49	$5.25

PALs and GALs — Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
28020CP	PAL16L8	20	Octal 16-input AND-OR-INVERT gate array	$2.25	$1.75	$1.66
88399CP	16V8-10*	20	10ns 64 x 32 AND array	2.59	2.35	2.10
37452CP	16V8-15*	20	15ns 64 x 32 AND array	1.39	1.25	1.12
37461CP	16V8-25*	20	25ns 64 x 32 AND array	1.25	1.09	.99
88292CP	20V8-10**	24	10ns 64 x 40 AND array	3.29	2.99	2.69
38658CP	20V8-15**	24	15ns 64 x 40 AND array	1.75	1.55	1.35
38666CP	20V8-25**	24	25ns 64 x 40 AND array	1.75	1.59	1.45
123801CP	22V10-10	24	10ns 132 x 44 AND array	5.49	4.99	4.49
39159CP	22V10-15	24	15ns 132 x 44 AND array	4.49	3.95	3.55
39167CP	22V10-25	24	25ns 132 x 44 AND array Lattice	3.99	3.49	3.09

GALs are electrically erasable PLDs that can be used in place of numerous PALs

* Replaces PALs: 10H8, 10L8, 10P8, 12H6, 12L6, 12P6, 14H4, 14L4, 14P4, 16H2, 16H8, 16L2, 16L8, 16P2, 16P8, 16R4, 16R6, 16R8, 16RP4, 16RP6, 16RP8

** Replaces PALs: 14H8, 14L8, 14P8, 16H6, 16L6, 16P6, 18H4, 18L4, 18P4, 20H2, 20H8, 20L2, 20L8, 20P2, 20P8, 20R4, 20R6, 20R8, 20RP4, 20RP6, 20RP8

PEEL Devices (CMOS) — Dual-In-Line

Programmable Electrically Erasable Logic (PEEL) devices allow for superset replacement of over 40 standard 20-pin and 24-pin PLDs (PAL, GAL, EPLD, etc.). They also offer additional architectural features so more logic can be put into every design.

Part No.	Cross Ref.	Pins	Description	1	10	100
105953CP	18CV8P-25	20	PLD superset 12 config. I/O pins (8) 25ns ..	$2.25	$1.95	$1.75
105996CP	22CV10AP-25	24	PLD superset 4/12 config. I/O pins (10) 25ns	2.59	2.07	1.80

IC Test Clip Series

• For temporary connections to DIP package components
• Heavy-duty spring loaded hinge provides positive contact
• 20 AWG insulated gold contacts
• Color: white

22103CP

Part No.	Cross Ref.	Description	1	10	25
22103CP	JTC16	16-pin (for 8, 14 and 16-pin ICs)	$6.95	$6.25	$5.59
22120CP	JTC20	20-pin (for 18 and 20-pin ICs)	8.95	6.50	5.35
22162CP	JTC28	28-pin	10.95	9.95	8.95
22189CP	JTC40	40-pin	11.95	11.35	10.75

4000 Series — Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
12562CP	CD4001**	14	Quad 2-input NOR gate	$.29	$.24	$.21
12597CP	CD4007	14	Dual comp. pair with inverter	.29	.25	.22
12634CP	CD4011**	14	Quad 2-input NAND gate	.29	.24	.21
12677CP	CD4013**	14	Dual D flip-flop with set/reset	.39	.34	.25
12706CP	CD4015*	16	Dual 4-stage static shift register	.39	.35	.31
12722CP	CD4016*	14	Quad bilateral switch	.29	.25	.22
12749CP	CD4017*	16	Decade counter/divider	.39	.35	.31
12773CP	CD4018	16	Presettable divide-by-N counter	.49	.37	.26
12802CP	CD4020*	16	14-stage binary/ripple counter	.55	.49	.44
12829CP	CD4021	16	8-stage static shift register	.42	.35	.29
54666CP	CD4022	16	Div. by 8-cntr./driver w/ 8-decoded outputs ..	.59	.43	.37
12845CP	CD4023*	14	Triple 3-input NAND gate	.29	.23	.17
12853CP	CD4024*	14	7-stage binary counter	.39	.33	.25
12888CP	CD4027*	16	Dual JK master-slave flip-flop	.29	.24	.21
12909CP	CD4028	16	BCD-to-decimal decoder	.45	.32	.28
12925CP	CD4029	16	Presettable up/down counter	.55	.41	.29
12950CP	CD4040*	16	12-stage binary/ripple counter	.39	.35	.29
12984CP	CD4042	16	Quad clocked D latch..............................	.49	.39	.29
12992CP	CD4043	16	Quad NOR R-S latch tri-state	.35	.26	.18
13004CP	CD4044	16	Quad 3-state NAND R-S latch tri-state	.49	.37	.26
13012CP	CD4046*	16	Micropower phase-locked loop	.49	.45	.39
13039CP	CD4047	14	Monostable/astable multivibrator	.48	.44	.42
13055CP	CD4049**	16	Hex/buffer/converter (inverting)	.29	.24	.21
13071CP	CD4050*	16	Hex/buffer/converter (N-inverting)	.29	.26	.23
13098CP	CD4051*	16	Single 8-channel multi./demultiplexer	.45	.39	.35
13119CP	CD4052	16	Diff. 4-channel multi./demultiplexer	.45	.34	.24
13127CP	CD4053*	16	Triple 2-channel multi./demultiplexer	.45	.39	.35
13151CP	CD4060	16	14-stage ripple-carry binary	.49	.45	.39
13186CP	CD4066**	14	Quad bilateral switch	.35	.29	.25
13215CP	CD4067	24	16-channel analog multi/demultiplexer ...	1.29	1.09	.87
13231CP	CD4069*	14	Hex inverter (74C04)	.29	.26	.23
13258CP	CD4070*	14	Quad EXCLUSIVE-OR gate (74C86)	.29	.26	.23
13274CP	CD4071*	14	Quad 2-input OR gate	.29	.26	.23
13354CP	CD4081*	14	Quad 2-input AND gate	.25	.19	.17
13400CP	CD4093*	14	Quad 2-input NAND Schmitt trigger	.29	.25	.22
13426CP	CD4094	16	8-stage shift-and-store bus register	.49	.43	.37
13434CP	CD4098	16	CMOS/MOS dual mono. multivibrator	.46	.37	.28
13442CP	CD4099	16	8-bit addressable latch	.49	.35	.25
44257CP	CD40106	14	Hex inverter Schmitt trigger (74C14)	.39	.35	.31
13469CP	CD4503	16	Tri-state hex buffer (74C367) 80C97	.39	.34	.29
13485CP	CD4510	16	BCD up/down counter	.69	.59	.45
13493CP	CD4511*	16	BCD to 7-seg. latch/decoder/driver	.69	.59	.49
13514CP	CD4512	16	8-channel data selector	.59	.44	.31
13522CP	CD4514	24	4-bit latch/4-16 line decoder	.89	.79	.69
13549CP	CD4516	16	Binary up/down counter	.54	.40	.28
13565CP	CD4518	16	Dual BCD up counter	.49	.37	.26
13581CP	CD4520	16	Dual binary up counter	.49	.37	.26
13590CP	CD4522	16	Program. BCD divide-by-N counter	.89	.67	.47
13602CP	CD4526	16	Divide-by-N counter (binary)	.55	.47	.42
13611CP	CD4528	16	Dual monostable multivibrator	.69	.49	.39
13653CP	CD4538*	16	Dual precision monostable multivibrator	.59	.53	.48
13688CP	CD4541	14	Oscillator/programmable timer	.49	.45	.39
13696CP	CD4543*	16	BCD to 7-segment decoder (LCD)	.69	.59	.44
13709CP	CD4553	16	3-digit BCD counter	2.95	2.75	2.49
13768CP	CD4584*	14	Hex Schmitt trigger (74C14) 40106	.39	.35	.29

*10 pcs. in 4000 series IC cabinet kit, pg 106   **20 pcs. in 4000 series IC cabinet kit, pg 106

7400 Series — Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
48979CP	7400**	14	Quad 2-input NAND gate	$.65	$.55	$.45
49007CP	7401	14	Quad 2-input NAND gate (O.C.)	.49	.45	.39
49015CP	7402*	14	Quad 2-input NOR gate	.59	.49	.45
49040CP	7404**	14	Hex inverter	.59	.49	.45
49074CP	7405*	14	Hex inverter (O.C.)	.39	.33	.29
49091CP	7406**	14	Hex inverter buffer/driver (O.C.)	.45	.39	.35
49120CP	7407**	14	Hex buffer/driver (O.C.)	.35	.32	.28

*10 pcs. in 7400 series IC cabinet kit, pg 106   **20 pcs. in 7400 series IC cabinet kit, pg 106

Color Code Legend New Sale Qty. Save

See page 79 for Surface Mount ICs.

Color Code Legend
New Sale Qty. Save Refurbished Closeout

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**

7400 Series (Continued)
Dual-In-Line

✳ Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pins	Description	1	10	100
49146CP	7408*	14	Quad 2-input AND gate	$.79	$.55	$.45
49189CP	7410*	14	Triple 3-input NAND gate	.29	.22	.15
49402CP	7413	14	Dual 4-input NAND gate Schmitt trigger	.89	.67	.47
49437CP	7414*	14	Hex inverter Schmitt trigger	.62	.55	.49
49630CP	7416*	14	Hex inverter buffer/driver (O.C.)	.69	.52	.36
49728CP	7417*	14	Hex buffer/driver (O.C. hi-voltage)	.79	.59	.41
50008CP	7420*	14	Dual 4-input NAND gate	.49	.45	.39
50083CP	7425	14	Dual 4-input NOR gate with strobe	.89	.79	.69
50139CP	7427	14	Triple 3-input NOR gate	.49	.37	.26
50198CP	7428	14	Quad 2-input NOR buffer	.29	.25	.22
50227CP	7430*	14	8-input NAND gate	.39	.28	.19
50235CP	7432*	14	Quad 2-input OR gate	.59	.49	.45
50315CP	7438*	14	Quad 2-input NAND buffer (O.C.)	.39	.29	.20
50358CP	7440	14	Dual 4-input NAND buffer	.59	.53	.49
50374CP	7442	16	BCD-to-decimal decoder	.99	.74	.52
50403CP	7445	16	BCD-to-decimal decoder/driver (30V)	.89	.79	.69
50411CP	7446	16	BCD-to-7 segment decoder/driver (30V)	1.49	1.29	.99
50420CP	7447*	16	BCD-to-7 segment decoder/driver (15V)	1.49	1.29	.99
50518CP	7470*	14	Edge-triggered JK flip-flop	.89	.79	.72
50526CP	7472	14	AND gated JK master/slave flip-flop	.99	.75	.53
50534CP	7473	14	Dual JK flip-flop with clear	.89	.79	.63
50551CP	7474**	14	Dual D flip-flop	.59	.52	.45
50577CP	7475	16	4-bit bi-stable latch	2.95	2.75	2.49
50593CP	7476	16	Dual JK flip-flop with preset and clear	.89	.73	.59
50631CP	7483	16	4-bit binary full adder	.89	.79	.69
50657CP	7485*	16	4-bit magnitude comparator	.49	.39	.29
50665CP	7486	14	Quad EXCLUSIVE-OR gate	.79	.59	.45
50681CP	7489	16	64-bit RAM P 50ns	3.49	3.19	2.99
50690CP	7490	14	Decade counter	1.49	1.15	.78
50737CP	7492	14	Divide-by-12 counter	1.49	1.15	.78
50745CP	7493	14	4-bit binary counter	1.49	1.15	.78
50770CP	7495*	14	4-bit parallel-access shift register (K155N)	.69	.59	.39
50788CP	7496	16	5-bit parallel-in, parallel-out shift register	.21	.19	.17
50796CP	7497	16	Synch. 6-bit binary rate multipliers	1.39	1.04	.73
49234CP	74107*	14	Dual JK flip-flop with clear	.39	.29	.19
49293CP	74116	24	Dual 4-bit latches with clear	.99	.74	.52
49322CP	74121	14	Monostable multivibrator	.99	.89	.79
49349CP	74122	14	Retriggerable mono. multivibrator with clear	.89	.80	.72
49357CP	74123*	16	Dual retriggerable mono. multivibrator	.89	.80	.64
49373CP	74125	14	Quad bus buffer tri-state (DM8093N)	.89	.79	.69
49411CP	74132*	14	Quad 2-input NAND Schmitt trigger	.89	.67	.47
49496CP	74148	16	8 to 3 line octal priority encoder	.99	.89	.79
49509CP	74150	24	16 to 1 line multiplexer	1.95	1.75	1.55
49525CP	74151*	16	8-input multiplexer	.33	.29	.23
49550CP	74153*	16	Dual 4/1 data selector/multiplexer	.39	.26	.19
49568CP	74154	24	4 to 16 line decoder/demultiplexer	2.25	1.95	1.75
49605CP	74157*	16	Quad 2/1 data selector	.34	.26	.18
49648CP	74160*	16	Decade counter with asynch. clear	.29	.22	.15
49664CP	74161	16	Synchronous 4-bit counter	.39	.29	.20
49672CP	74163	16	Synchronous 4-bit counter	.49	.37	.26
49681CP	74164	14	8-bit serial shift register	.49	.37	.26
49699CP	74165	16	8-bit serial shift register, parallel load	.59	.44	.31
49779CP	74174*	16	Hex D-type flip-flop with clear	.59	.44	.31
49795CP	74175*	16	Quad D-type flip-flop with clear	.49	.37	.25
49824CP	74179	16	4-bit parallel-access shift register		✳.08	.07
49832CP	74180	14	9-bit odd/even parity generator/checker	1.99	1.79	1.59
49841CP	74181	24	Arithmetic logic unit/function generator	1.95	1.49	1.05
49883CP	74189	16	64-bit RAM tri-state (DM8599N)	3.59	2.69	1.89
49904CP	74191	16	Binary up/down counter	1.18	.89	.62
49912CP	74192	16	Decade up/down counter with clear	3.69	3.39	3.19
49939CP	74193	16	Binary up/down counter with clear	1.39	1.19	1.09
49955CP	74194	16	4-bit bi-directional shift register	1.39	1.25	1.15
49963CP	74195	16	4-bit parallel-access shift register	1.85	1.75	1.65
50104CP	74259	16	8-bit addressable latch (9334)	.59	.53	.49
50171CP	74279*	16	Quad set-reset latch	1.39	1.25	1.15
88225CP	SDLD001A	—	Texas Instruments TTL Data Book	34.95	31.49	29.95

*10 pcs. in 7400 series IC cabinet kit, pg 106   **20 pcs. in 7400 series IC cabinet kit, pg 106

74AC Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
211801CP	74AC00	14	Quad 2-input NAND gate	$.20	$.18	$.155
211810CP	74AC02	14	Quad 2-input NOR gate	.20	.18	.145
211828CP	74AC04	14	Hex inverter	.18	.155	.135
211836CP	74AC08	14	Quad 2-input AND gate	.19	.17	.145
211844CP	74AC14	14	Hex inverter with Schmitt trigger input	.24	.20	.16
211852CP	74AC32	14	Quad 2-input OR gate	.20	.18	.145
211861CP	74AC74	14	Dual D-type pos. edge-triggered flip-flop	.20	.18	.145
211879CP	74AC86	14	Quad 2-input exclusive OR gate	.20	.18	.145
211887CP	74AC138	16	1 of 8 decoder/demultiplexer	.33	.29	.25
211895CP	74AC240	20	Octal buffer/line driv. w/ 3-st. outputs (2-6V)	.32	.29	.235
211908CP	74AC244	20	Octal buffer/line driv. w/ 3-st. outputs (4.5-5.5V)	.35	.325	.27
211916CP	74AC245	20	Octal bidirectional trans. w/ 3-state I/O	.37	.30	.27
211924CP	74AC273	20	Octal D-type flip-flop	.40	.36	.30
211932CP	74AC373	20	Octal transparent latch w/ 3-state outputs	.40	.36	.30
211941CP	74AC374	20	Octal D-type flip-flop w/ 3-state outputs	.32	.29	.235

74ACT Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
211959CP	74ACT00	14	Quad 2-input NAND gate	$.20	$.18	$.145
211967CP	74ACT02	14	Quad 2-input NOR gate	.36	.25	.22
211975CP	74ACT04	14	Hex inverter	.21	.19	.155
211983CP	74ACT08	14	Quad 2-input AND gate	.17	.16	.155
211991CP	74ACT14	14	Hex inverter with Schmitt trigger input	.22	.20	.17
212003CP	74ACT32	14	Quad 2-input OR gate	.20	.20	.20
212011CP	74ACT74	14	Dual D-type pos. edge-triggered flip-flop	.20	.18	.145
212020CP	74ACT86	14	Quad 2-input exclusive OR gate	.20	.18	.145
212038CP	74ACT138	16	1 of 8 decoder/demultiplexer	.32	.28	.27
212046CP	74ACT240	20	Octal buffer/line driv. w/ 3-st. outputs (2-6V)	.32	.29	.235
212054CP	74ACT244	20	Octal buffer/line driv. w/ 3-st. outputs (4.5-5.5V)	.35	.325	.27
212062CP	74ACT245	20	Octal bidirectional trans. w/ 3-state I/O	.39	.34	.315
212071CP	74ACT273	20	Octal D-type flip-flop	.63	.44	.38
212089CP	74ACT373	20	Octal transparent latch w/ 3-state outputs	.55	.44	.34
212097CP	74ACT374	20	Octal D-type flip-flop w/ 3-state outputs	.32	.29	.235

74AHC Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
214092CP	74AHC00N	14	Quad 2-input positive NAND gate	$.34	$.29	$.25
214105CP	74AHC02N	14	Quad 2-input positive NOR gate	.34	.30	.27
214113CP	74AHC04N	14	Hex inverter	.46	.35	.26
214121CP	74AHC08N	14	Quad 2-input positive AND gate	.34	.29	.25
214130CP	74AHC14N	14	Hex inverter with Schmitt trigger input	.34	.32	.26
214148CP	74AHC32N	14	Quad 2-input positive OR gate	.46	.35	.26
214156CP	74AHC74N	14	Dual D-type pos. edge-triggered flip-flop	.29	.27	.25
214164CP	74AHC86N	14	Quad 2-input exclusive OR gate	.37	.32	.28
214172CP	74AHC240N	20	Octal buffer/driver w/ 3-st. outputs	.57	.51	.42
214181CP	74AHC244N	20	Octal buffer/driver w/ 3-st. outputs	.49	.44	.39
214199CP	74AHC245N	20	Octal bus transceiver w/ 3-state outputs	.52	.42	.37
214201CP	74AHC373N	20	Octal transparent D-type latch w/ 3-st. outputs	.42	.39	.37
214210CP	74AHC374N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.49	.44	.39
214228CP	74AHC541N	20	Octal buffer/driver w/ 3-state outputs	.39	.37	.30
214236CP	74AHC574N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.59	.49	.39

74AHCT Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
43844CP	74AHCT00N	14	Quad 2-input positive NAND gate	$.29	$.26	$.23
43852CP	74AHCT02N	14	Quad 2-input positive NOR gate	.29	.26	.23
43861CP	74AHCT04N	14	Hex inverter	.29	.26	.23
63431CP	74AHCT08N	14	Quad 2-input positive AND gate	.29	.266	.25
63458CP	74AHCT14N	14	Hex inverter with Schmitt trigger input	.29	.26	.24
43924CP	74AHCT74N	14	Dual D-type pos. edge-triggered flip-flop	.36	.31	.26
43932CP	74AHCT86N	14	Quad 2-input exclusive OR gate	.37	.33	.28
214244CP	74AHCT240N	20	Octal buffer/driver w/ 3-st. outputs (2-6V)	.49	.45	.39
63466CP	74AHCT244N	20	Octal buffer/driver w/ 3-st. outputs (4.5-5.5V)	.29	.243	.189
43887CP	74AHCT245N	20	Octal bus transceiver w/ 3-state outputs	.41	.39	.35
43908CP	74AHCT373N	20	Octal transparent D-type latch w/ 3-st. outputs	.39	.37	.35
43916CP	74AHCT374N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.52	.46	.37
214252CP	74AHCT574N	20	Octal edge-trig. D-type flip-flop w/ 3-st. outputs	.52	.46	.37

Integrated Circuits

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**

74C Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
44222CP	74C00	14	Quad 2-input NAND gate	$.69	$.55	$.39
44231CP	74C04	14	Hex inverter (CD4069)	.74	.56	.39
44257CP	74C14	14	Hex inverter Schmitt trigger (CD40106)	.39	.35	.31
44441CP	74C74	14	Dual D flip-flop	1.59	1.19	.83
44361CP	74C221	16	Dual monostable multivibrator	3.95	3.59	3.25
13469CP	74C367	16	Hex buffer tri-state (80C97/CD4503)	.39	.34	.29
44396CP	74C373	20	Octal D-type flip-flop with clear tri-state	3.75	3.25	2.49
44409CP	74C374	20	Octal D-type flip-flop tri-state (INS82C06N)	1.49	1.25	1.15
44564CP	74C922	18	16-key keyboard encoder (INS8245N)	6.29	5.05	4.26
44572CP	74C923	20	20-key keyboard encoder (INS8246N)	6.29	5.05	4.25
44581CP	74C925	16	4-digit CTR with MUX D segment driver	6.39	6.25	5.95
44599CP	74C926	18	4-digit CTR with MUX D segment driver	6.95	6.25	5.65

74HC Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
45161CP	74HC00	14	Quad 2-input NAND gate (6231581)	$.25	$.19	$.15
45188CP	74HC02	14	Quad 2-input NOR gate	.19	.15	.10
45209CP	74HC04	14	Hex inverter (buffered)	.25	.22	.19
45225CP	74HC08	14	Quad 2-input AND gate	.19	.17	.15
45233CP	74HC10	14	Triple 3-input NAND gate	.29	.22	.19
45268CP	74HC11	14	Triple 3-input AND gate	.19	.16	.14
45364CP	74HC14	14	Hex inverter Schmitt trigger	.29	.26	.23
45786CP	74HC30	14	8-input NAND gate	.29	.22	.15
45794CP	74HC32	14	Quad 2-input OR gate	.22	.15	.12
46130CP	74HC74	14	Dual D flip-flop	.35	.26	.18
46172CP	74HC85	16	4-bit magnitude comparator	.49	.45	.39
46181CP	74HC86	14	Quad EXCLUSIVE-OR gate	.39	.28	.21
45292CP	74HC123	16	Dual retrig. monostable multivibrator	.35	.25	.20
45305CP	74HC125	14	Quad bus buffer tri-state	.39	.35	.29
45321CP	74HC132	14	Quad 2-input NAND Schmitt trigger	.35	.26	.18
45330CP	74HC138	16	3-to-8 decoder/demultiplexer	.35	.29	.25
45356CP	74HC139	16	2-to-4 decoder/demultiplexer	.35	.29	.19
45401CP	74HC154	24	4/16 line decoder (.3"W)	1.09	.98	.89
111739CP	74HC154W	24	4/16 line decoder (.6"W)	1.59	1.39	1.19
45428CP	74HC157	16	Quad 2-input multiplexer	.39	.29	.20
45452CP	74HC161	16	Synchronous 4-bit counter	.39	.29	.27
45479CP	74HC163	16	Synchronous 4-bit counter	.49	.45	.40
45487CP	74HC164	14	8-bit serial shift register	.39	.29	.20
45495CP	74HC165	16	Parallel load 8-bit serial shift register	.39	.29	.20
45508CP	74HC174	16	Hex D flip-flop with clear	.49	.37	.26
45541CP	74HC192	16	Decade up/down counter with clear	1.59	1.19	.83
45559CP	74HC193	16	Binary up/down counter with clear	.79	.59	.41
45604CP	74HC221	16	Dual mono. multivibrator Schmitt trigger	.55	.41	.29
45612CP	74HC240	20	Octal inverting line driver tri-state	.49	.37	.26
45655CP	74HC244	20	Octal driver tri-state	.45	.39	.29
45671CP	74HC245	20	Octal transceiver tri-state	.45	.34	.24
45743CP	74HC273	20	Octal D-type flip-flop with clear	.69	.52	.36
45831CP	74HC373	20	Octal D-type flip-flop tri-state	.45	.39	.35
45858CP	74HC374	20	Octal D-type flip-flop edge-trig tri-state	.49	.39	.29
45874CP	74HC393	14	Dual 4-bit binary counter	.59	.44	.29
109760CP	74HC540	20	Octal invert. buffer/line driver tri-state	.65	.49	.34
46050CP	74HC541	20	Octal buffer/line driver tri-state	.69	.55	.35
46076CP	74HC573	20	Octal D-type flip-flop tri-state (INS82C06N)	.69	.52	.35
46084CP	74HC574	20	Octal D-type flip-flop tri-state	.59	.44	.31
88090CP	74HC590	16	8-bit binary counter w/ output reg. tri-state	.89	.67	.47
46105CP	74HC595	16	8-bit serial-to-parallel shift reg. tri-state	.62	.44	.39
46113CP	74HC688	20	8-bit mag. comparator	.69	.49	.39
45891CP	74HC4017	16	Decade ctr./div. with 10 decoded outputs	.59	.53	.48
45903CP	74HC4020	16	14-stage binary counter	.59	.45	.34
45920CP	74HC4040	16	12-stage binary counter	.69	.49	.41
45938CP	74HC4046	16	CMOS phase lock loop	.56	.42	.29
45954CP	74HC4050	16	Hex buffer/converter	.49	.45	.39
88102CP	74HC4051	16	Single 8-channel multi/demultiplexer	.59	.44	.31
45962CP	74HC4060	16	14-stage binary counter	.59	.44	.31
45971CP	74HC4066	14	Quad analog switch	.55	.41	.35
46009CP	74HC4514	S-24	4/16-line decoder with latch (.3"W)	1.95	1.49	1.15
46017CP	74HC4538	16	Dual retrig. mono. multivibrator	.59	.44	.31

74HCT Series
Dual-In-Line

✳ Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pins	Description	1	10	100
44871CP	74HCT00	14	Quad 2-input NAND gate (Y560820T)	$.29	$.22	$.15
44898CP	74HCT04	14	Hex inverter	.29	.22	.16
44901CP	74HCT08	14	Quad 2-input AND gate	.25	.19	.12
44935CP	74HCT14	14	Hex inverter Schmitt trigger	.39	.29	.20
45057CP	74HCT32	14	Quad 2-input OR gate	.34	.26	.18
45137CP	74HCT74	14	Dual D flip-flop	✳	.12	.10
44927CP	74HCT138	16	3-to-8 decoder/demultiplexer	.29	.22	.15
63773CP	74HCT139	16	2-to-4 decoder/demultiplexer	.29	.25	.22
88057CP	74HCT154	24	4-to-16 decoder/demultiplexer	1.59	1.19	.85
45014CP	74HCT240	20	Octal inverting line driver tri-state	.49	.37	.26
45022CP	74HCT244	20	Octal driver tri-state	.39	.29	.19
45031CP	74HCT245	20	Octal transceiver tri-state	.45	.33	.23
45049CP	74HCT273	20	Octal D-type flip-flop with clear	.39	.35	.31
45065CP	74HCT373	20	Octal D-type flip-flop tri-state	.49	.39	.29
45073CP	74HCT374	20	Octal D-type flip-flop edge-trig. TS	.49	.39	.29
99303CP	74HCT541	20	Octal buffer/line driver tri-state	.69	.59	.39
45090CP	74HCT573	20	Octal D-type latched flip-flop tri-state	.69	.49	.34
45102CP	74HCT574	20	Octal D-type flip-flop edge-trigger tri-state	.69	.52	.36
45129CP	74HCT688	20	8-bit magnitude comparator	.69	.59	.49

74LS Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
46252CP	74LS00**	14	Quad 2-input NAND gate	$.31	$.28	$.24
46287CP	74LS02**	14	Quad 2-input NOR gate	.29	.25	.21
46308CP	74LS03	14	Quad 2-input NAND gate (O.C.)	.32	.24	.17
46316CP	74LS04**	14	Hex inverter	.29	.26	.23
46341CP	74LS05*	14	Hex inverter (O.C.)	.34	.26	.18
46359CP	74LS06	14	Hex inverter buffer/driver (O.C.)	.59	.55	.49
46367CP	74LS07	14	Hex buffer/driver (O.C. hi-voltage)	.84	.79	.74
46375CP	74LS08**	14	Quad 2-input AND gate	.36	.31	.29
46391CP	74LS09	14	Quad 2-input AND gate (O.C.)	.25	.19	.13
46404CP	74LS10*	14	Triple 3-input NAND gate	.29	.22	.15
46439CP	74LS11*	14	Triple 3-input AND gate	.31	.25	.19
46640CP	74LS14*	14	Hex inverter Schmitt trigger	.29	.26	.23
47095CP	74LS20*	14	Dual 4-input NAND gate	.35	.25	.19
47108CP	74LS21	14	Dual 4-input AND gate	.29	.22	.15
47378CP	74LS27	14	Triple 3-input NOR gate	.25	.17	.14
47458CP	74LS30*	14	8-input NAND gate	.29	.22	.15
47466CP	74LS32**	14	Quad 2-input OR gate	.29	.26	.23
47597CP	74LS37	14	Quad 2-input NAND gate buffer	.49	.37	.26
47693CP	74LS38	14	Quad 2-input NAND gate buffer (O.C.)	.29	.22	.15
47773CP	74LS42	16	BCD-to-decimal decoder/driver	.69	.59	.49
47790CP	74LS47*	16	BCD to 7-seg. decoder/driver (O.C.)	.72	.52	.45
47811CP	74LS48	16	BCD to 7-seg. decoder/driver	4.95	4.50	3.99
47992CP	74LS73*	14	Dual JK flip-flop with clear	.49	.39	.25
48004CP	74LS74**	14	Dual D flip-flop	.29	.25	.22
48021CP	74LS75*	16	4-bit bi-stable latch	.55	.41	.29
48039CP	74LS76	16	Dual JK flip-flop with preset and clear	.69	.62	.55
48063CP	74LS83	16	4-bit binary full adder	.45	.39	.35
48071CP	74LS85*	16	4-bit magnitude comparator	.35	.29	.25
48098CP	74LS86*	14	Quad EXCLUSIVE-OR gate	.35	.29	.19
48119CP	74LS90*	14	Decade counter	.49	.45	.39
48143CP	74LS92	14	Divide-by-12 counter	.45	.39	.35
48151CP	74LS93*	14	4-bit binary counter	.89	.79	.70
48178CP	74LS95	14	4-bit parallel-access shift register	.89	.79	.69
46412CP	74LS107	14	Dual JK flip-flop with clear	.39	.24	.16
46421CP	74LS109	16	Dual JK pos. edge-trig. flip-flop	.29	.22	.15
46447CP	74LS112	16	Dual JK neg. edge-trig. flip-flop	.29	.22	.15
46471CP	74LS122	14	Retrig. mono. multivibrator comm. CLK	.39	.35	.24
46480CP	74LS123*	16	Dual mono. multivibrator with clear	.33	.25	.19
46501CP	74LS125*	14	Quad bus buffer neg. enable tri-state	.39	.29	.21
46527CP	74LS126	14	Quad bus buffer tri-state	.35	.26	.18
46551CP	74LS132	14	Quad 2-input NAND Schmitt trigger	.35	.26	.18
46586CP	74LS136	14	Quad EXCLUSIVE-OR gate (O.C.)	.49	.36	.19
46607CP	74LS138**	16	3 to 8 decoder/demultiplexer	.38	.35	.29
46623CP	74LS139*	16	2 to 4 decoder/demultiplexer	.36	.32	.29
46666CP	74LS145	16	BCD-to-decimal decoder/driver	.49	.45	.39
46674CP	74LS147	16	10 to 4 priority encoder	2.15	2.05	1.95

*10 pcs. in 74LS series IC cabinet kit, pg 106   **20 pcs. in 74LS series IC cabinet kit, pg 106

Color Code Legend
New Sale Qty. Save Pull Closeout

Call for pricing on quantities over 100 – we carry major manufacturers.   **We will special order any IC – 100 Piece Minimum**
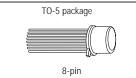
74LS Series (Continued)
Dual-In-Line

✳ Prepackaged: order in increments of 10 or 100

Part No.	Cross Ref.	Pins	Description	1	10	100
46682CP	74LS148	16	8 to 3 priority encoder	$.79	$.69	$.56
46703CP	74LS151*	16	8-input multiplexer	.39	.35	.31
46720CP	74LS153	16	Dual 4-to-1 selector/multiplexer	.29	.22	.15
46738CP	74LS154	24	4 to 16 line decoder/demultiplexer	2.49	2.25	2.05
46754CP	74LS155*	16	Dual 2/4 demultiplexer	.39	.29	.20
46762CP	74LS156	16	Dual 2/4 demultiplexer (O.C.)	.29	.23	.20
46771CP	74LS157*	16	Quad 2/1 data selector	.29	.22	.15
46800CP	74LS160	16	Decade counter with asynch. clear	.89	.79	.69
46818CP	74LS161	16	Synch 4-bit counter	.35	.26	.18
46842CP	74LS163	16	Fully synch. 4-bit counter	.39	.29	.20
46851CP	74LS164	14	8-bit serial shift register	.35	.25	.19
46877CP	74LS165	16	8-bit serial shift register, parallel load	.49	.39	.29
46885CP	74LS166	16	8-bit shift register, parallel load	.35	.26	.18
46906CP	74LS169	16	Synch. binary up/down counter	.59	.44	.31
46922CP	74LS173	16	4-bit D-type reg. tri-state	.49	.44	.39
46931CP	74LS174*	16	Hex D flip-flop with clear	.29	.22	.15
46957CP	74LS175*	16	Quad D flip-flop with clear	.35	.31	.27
46973CP	74LS181	24	Arithmetic logic unit/function generator	1.09	.82	.57
46990CP	74LS190	16	Synchronous up/down counter	1.49	1.34	1.19
47001CP	74LS191	16	Up/down binary counter	.39	.29	.20
47010CP	74LS192	16	Decade up/down counter with clear	3.95	3.59	3.25
47036CP	74LS193*	16	Binary up/down counter with clear	.59	.49	.45
47052CP	74LS194	16	4-bit bi-directional shift register	.59	.49	.45
47061CP	74LS195	16	4-bit parallel-access shift register	.35	.26	.18
47124CP	74LS221	16	Dual mono. multivibrator Schmitt trigger	.39	.35	.29
47141CP	74LS240*	20	Octal invert. line driver tri-state	.44	.33	.23
47167CP	74LS241	20	Octal bus/line driver tri-state	.39	.29	.19
47175CP	74LS243	14	Quad transceiver tri-state	✳	.15	.14
47183CP	74LS244*	20	Octal driver tri-state	.44	.35	.25
47212CP	74LS245*	20	Octal bus transceiver tri-state	.45	.39	.35
47247CP	74LS247	16	BCD to 7-segment decoder/driver (O.C.)	.79	.69	.49
47271CP	74LS251	16	8-channel multiplexer tri-state	.42	.30	.24
47298CP	74LS257	16	Quad 2-input multiplexer tri-state	.21	.19	.17
47327CP	74LS259	16	8-bit addressable latch	.39	.29	.20
47360CP	74LS266	14	Quad EXCLUSIVE-NOR gate (O.C.)	.35	.28	.21
47386CP	74LS273*	20	Octal D-type flip-flop with clear	.39	.35	.29
47407CP	74LS279	16	Quad set-reset latches	.34	.26	.18
47415CP	74LS280	14	9-bit odd/even parity generator/checker	.69	.62	.55
47423CP	74LS283	16	4-bit binary full add with fast carry	.49	.39	.25
47440CP	74LS299	20	8-bit universal shift/storage register	1.19	.89	.62
47546CP	74LS365	16	Hex buffer with logical OR tri-state	.69	.62	.55
47554CP	74LS366	14	Hex buffer/inverter tri-state	✳	.06	.055
47562CP	74LS367	16	Hex buffer tri-state	.39	.29	.20
47600CP	74LS373*	20	Octal D flip-flop tri-state	.45	.39	.35
47634CP	74LS374*	20	Octal D F/F edge-trig tri-state	.45	.39	.34
47669CP	74LS377	20	Octal D register common enable	.53	.40	.34
47722CP	74LS390	16	Dual 4-bit decade counter	.49	.39	.25
47731CP	74LS393	14	Dual 4-bit binary counter	.45	.34	.24
47861CP	74LS540	20	Octal invert. buffer/line driver tri-state	.59	.53	.47
47870CP	74LS541	20	Octal buffer/line driver tri-state	.69	.59	.49
64418CP	74LS573	20	Octal D-type F/F latch tri-state	1.49	1.15	.78
64426CP	74LS574	20	Octal D-type F/F edge-trig. tri-state	1.49	1.34	1.19
47909CP	74LS590	16	8-bit binary counter without reg. tri-state	4.99	4.49	3.99
103974CP	74LS595	16	8-bit serial-to-parallel shift reg. tri-state	4.49	3.50	2.94
47950CP	74LS645	20	Octal bus transceiver tri-state	1.69	1.29	.89
47984CP	74LS688	20	8-bit magnitude comparator	1.09	.89	.69

*10 pcs. in 74LS series IC cabinet kit, pg 106

74S Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
48944CP	74S74	14	Dual D flip-flop	✳	$.053	$.048
48531CP	74S188	16	256-bit (32 x 8) PROM O.C. (27S18)	4.95	4.45	3.99
48557CP	74S189	16	64-bit (16 x 4) RAM tri-state (27S03)	3.95	2.99	2.09
48696CP	74S287	16	1k-bit (256 x 4) PROM tri-state (TBP24S10)	6.95	6.25	5.65
48717CP	74S288	16	256-bit (32 x 8) PROM tri-state (TBP18S030N)	4.95	3.75	2.65
48805CP	74S387	16	1k-bit (256 x 4) PROM O.C. (TBP24SA10N)	4.29	3.89	3.59
52513CP	74S428	28	System contr./bus driver (8228)	2.95	2.19	1.55
48864CP	74S472	20	4k-bit (512 x 8) PROM tri-state (TBP28S42N)	8.95	7.95	6.95
48910CP	74S571	16	2k-bit (512 x 4) PROM tri-state (AM27S13)	5.99	5.69	5.39
48928CP	74S573	18	4k-bit (1024 x 4) PROM tri-state (53S441J)	3.05	2.73	2.46

9000 Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
53663CP	9368	16	FND70 driver/latch	$4.49	$3.95	$3.55
10567CP	AM9513APC	40	System timing controller	39.95	29.99	20.99

A/D & D/A Converters
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
115158CP	AD558JN	16	Microprocessor compat. 8-bit DAC	$17.95	$12.75	$12.11
10145CP	ADC0803LCN	20	8-bit A/D converter (±1/2 LSB)	5.95	4.49	3.39
10153CP	ADC0804LCN	20	8-bit A/D converter (1 LSB)	2.69	2.39	2.09
10170CP	ADC0808CCN	28	8-bit A/D converter with 8-ch. multiflexer	5.19	4.15	3.89
10188CP	ADC0809CCN	28	8-bit A/D converter with 8-ch. multiflexer	2.95	2.75	2.49
10209CP	ADC0817CCN	40	8-bit A/D converter with 16-ch. multiflexer	8.45	7.49	5.99
10225CP	ADC0820CCN	20	8-bit high speed A/D conv. w/ track/hold	4.95	3.75	2.65
116100CP	ADC0831CCN	8	8-bit A/D converter w/ single diff. input	1.95	1.75	1.59
14904CP	DAC0800LCN	16	8-bit D/A converter (±1 LSB)	1.79	1.59	1.45
14912CP	DAC0806LCN	16	8-bit D/A converter (±1 LSB) MC1408P6	4.95	3.75	2.65
14947CP	DAC0808LCN	16	8-bit D/A converter (MC1408P8)	1.59	1.39	1.09
14963CP	DAC0830LCN	20	8-bit µP D/A converter (.05% Lin.)	5.95	4.59	4.15
128186CP	DAC0832LCN	20	8-bit µP D/A conv. dbl. buff. (.05% Lin.)	3.95	3.59	3.25
14980CP	DAC1222LCN	18	12-bit D/A converter (.20% Lin.)	9.95	8.95	8.05
14947CP	MC1408-8	16	8-bit D to A converter (DAC0808LCN)	1.59	1.39	1.09
43748CP	7106CPL	40	3 1/2-digit LCD single-chip A/D converter	3.39	2.99	2.49
43756CP	7107CPL	40	3 1/2-digit LED single-chip A/D converter	3.49	2.79	2.59
43764CP	7109CPL	40	12-bit A/D converter	7.99	5.99	4.19
51879CP	8038CCPD	14	Waveform generator/volt control OSC	3.19	2.39	1.69

MAXIM Type Interface Series
Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	100
142535CP	MAX202CPE	16	+5V RS-232 trans. requires 0.1µF caps	$2.49	$2.25	$2.05
24811CP	MAX232CPE	16	+5V powered, dual RS-232 transmitter/ receiver (0°C to +70°C) SP232ACP	2.19	1.75	1.45
106155CP	MAX232EPE	16	+5V powered, dual RS-232 transmitter/receiver (-40°C to +85°C)	2.49	2.25	2.05
106163CP	MAX233CPP	20	+5V powered, multichannel RS-232 drivers/receivers (no ext. components)	5.75	5.18	4.66
106171CP	MAX235CPG	24	+5V powered, five RS-232 transmitter/ receiver (no ext. components)	9.95	8.95	7.85
106180CP	MAX238CNG	24	+5V powered, quad RS-232 transmitter and receiver	5.25	4.70	3.59
106219CP	MAX690CPA	8	Microprocessor watchdog/battery switchover/reset generator	4.99	4.49	3.25
106227CP	MAX691CPE	16	Microprocessor watchdog/battery switchover/reset generator	6.25	4.69	3.29
106260CP	MAX1232CPA	8	Microprocessor monitor	2.49	2.25	2.05

E-Lab Digital Interface ICs

Stepper Motor Controllers
Designed to interface a logic level input byte to a stepper motor.

Part No.	Product No.	Pins	Description	1	10	50
141532CP	EDE1200	18	Unipolar stepper motor controller	$8.95	$7.95	$6.95
157526CP	EDE1204	18	Bipolar stepper motor controller	8.95	7.95	6.95

Keypad Encoder
Designed to interface a matrix type 4 row x 4 column (16 key or less) keypad to a microcontroller or other host processor.

Part No.	Product No.	Pins	Description	1	10	50
171969CP	EDE1144	18	Keypad Encoder	$6.95	$6.25	$5.59

Serial LCD Interface
Provides a cost-effective LCD control solution for a wide variety of embedded designs. Allows nearly any-text based LCD module to be controlled via a simple one-wire data link.

Part No.	Product No.	Pins	Description	1	10	50
171951CP	EDE702	18	Serial LCD Interface	$8.95	$7.95	$6.95

HOLTEK Remote Control Encoders/Decoders

Part No.	Product No.	Pins	Description	1	10	100
123730CP	HT12E	18	Encoder 12-bit	$1.69	$1.49	$1.35
123748CP	HT12D	18	Decoder 8-bit address / 4-bit data	1.69	1.49	1.35
126594CP	HT640	24	Encoder 10-bit address / 8-bit address/data	2.95	2.75	2.49
126607CP	HT648L	24	Decoder 10-bit address / 8-bit latch data	3.29	2.99	2.69

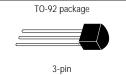**Call for pricing on quantities over 100 – we carry major manufacturers.**   **We will special order any IC – 100 Piece Minimum**

TO-3 package	TO-5 package	TO-92 package	TO-220 package	DIP package
2 or 4-pin	8-pin	3-pin	3, 5 or 11-pin	8, 10, 14, 16, 18, 20, 24 and 28-pin

KAE Servo and Stepper Motor Controllers

Controllers operate from standard 8-bit serial interface (RS232 or RS485). Using RS485, any mix of up to 32 controllers may be operated from a single serial port. Complete documentation.

146472CP: PIC-SERVO Motion Control Chipset for DC Motors
- PIC servo control for DC motors with digital encoders
- 32-bit position, velocity, and acceleration resolution
- PWM and direction outputs connect to servo amplifier
- Two chip set (PIC-SERVO 28-pin and PIC-ENC 18-pin)

175901CP: PIC-STEP Motion Control Chip for Stepper Motors
- Step rates up to 50,000 steps/sec. – suitable for use with microstepping drivers
- Trapezoidal positioning and profiled velocity moves
- Programmable current limits automatically switch between holding and running currents • Programmable accelerations and minimum step rates

175901CP

Part No.	Description	Pins	1	10	50
146472CP	PIC-SERVO chip set, 0.3" DIP	28/18	$34.95	$29.95	$27.95
175901CP	PIC-STEP chip, 0.3" DIP	28	29.95	26.95	24.25

Linear Series

Package (See above)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
23051CP	LH0002CN	DIP-10	General purpose buffer	$9.95	$8.95	$7.95
27852CP	OP07	DIP-8	Ultra-low-offset-voltage op amp.	.99	.89	.79
120715CP	LM10CN	DIP-8	Op amp and voltage reference	5.95	5.39	4.95
23106CP	LM10CLN	DIP-8	Low voltage (1.1 volt) op amp.	3.25	2.75	2.49
25751CP	MF10CN	DIP-20	General purpose dual active filter	3.25	2.75	2.49
120723CP	LM12CLK	TO-3/4	80W op amp.	29.95	27.95	25.95
16301CP	DS0026CN	DIP-8	Dual mos clk. driver (5MHz)(TC426CPA)	1.95	1.56	1.19
115318CP	OP27GP	DIP-8	Low noise prec. op amp (-40˚C to 80˚C)	1.95	1.75	1.59
107094CP	LM34CZ	TO-92	Prec. F temp. sensor (-40˚F to +230˚F)	5.49	4.49	4.39
155192CP	LM34DZ	TO-92	Prec. F temp. sensor (+32˚F to +212˚F)	1.79	1.35	.94
192217CP	LM35DT	TO-220/3	Prec. C temp. sensor (-55˚C to 150˚C)	2.79	2.09	1.49
107107CP	LM35CZ	TO-92	Prec. C temp. sensor (-40˚C to 110˚C)	5.95	5.39	4.95
155740CP	LM35DZ	TO-92	Prec. C temp. sensor (0˚C to +100˚C)	1.75	1.55	1.35
213090CP	TL022CP	DIP-8	Dual low power op amp.	1.59	1.25	.95
213102CP	TL031CP	DIP-8	Enhanced JFET low pwr. low offset op amp.	.72	.65	.53
213111CP	TL032CP	DIP-8	Enhanced JFET low pwr. low offset op amp.	.95	.85	.71
214068CP	TL034CN	DIP-14	Enhanced low power low offset op amp.	1.45	1.19	.95
213129CP	TL052ACP	DIP-8	Enhanced JFET low offset op amp.	4.19	3.39	2.79
213153CP	TL054ACN	DIP-14	Enhanced JFET low offset op amp.	4.99	3.99	3.39
213145CP	TL054CN	DIP-14	Enhanced JFET low offset op amp.	1.59	1.37	1.03
213137CP	TL061ACP	DIP-8	Low power JFET input op amp.	.85	.62	.55
33161CP	TL062CP	DIP-8	Low power JFET op amp. (VCC 8-pin)	.45	.34	.24
33179CP	TL064CN	DIP-14	Low power JFET input op amp.	.49	.45	.37
2113081CP	TL071ACP	DIP-8	Low noise JFET input op amp.	.49	.44	.36
33187CP	TL071CP	DIP-8	Low noise JFET op amp.	.39	.35	.29
213073CP	TL072ACP	DIP-8	Low noise JFET input op amp.	.31	.28	.235
33195CP	TL072CP*	DIP-8	Low noise JFET dual op amp.	.39	.35	.29
213065CP	TL074BCN	DIP-14	Low noise JFET input op amp.	.78	.70	.59
33216CP	TL074CN*	DIP-14	Low noise JFET quad op amp.	.53	.39	.35
213057CP	TL081ACP	DIP-8	JFET input op amp.	.42	.39	.36
214076CP	TL082ACP	DIP-8	JFET input op amp.	.59	.52	.42
33232CP	TL081CP	DIP-8	JFET input op amp.	.39	.35	.31
33241CP	TL082CP*	DIP-8	JFET input dual op amp.	.49	.45	.39
214084CP	TL084ACN	DIP-14	JFET input op amp.	.73	.53	.47
33267CP	TL084CN*	DIP-14	JFET input quad op amp.	.49	.44	.39
212118CP	LM224N	DIP-14	Low power quad op amp.	.22	.19	.17
24811CP	MAX232CPE*	DIP-16	Dual RS-232 receiver/transmitter	2.19	1.75	1.45
212126CP	LM239N	DIP-14	Low pwr. low offset volt quad comp.	.29	.27	.24
212142CP	LM258N	DIP-8	Low power dual op amp.	.27	.25	.23
212151CP	LM301AN	DIP-8	Operational amplifier	.58	.43	.28
23392CP	LM301N*	DIP-8	Improved op amp.	.39	.35	.29
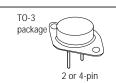
*10 pcs. in Linear series IC cabinet kit, pg 106
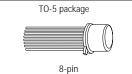
Linear Series (Continued)

Package (See above)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
213188CP	LM306N	DIP-8	Differential comparator w/ strobes	$.88	$.72	$.68
23464CP	LM308N*	DIP-8	Precision op amp.	4.49	3.39	2.39
23499CP	LM309K	TO-3/2	5V 1A regulator (0˚C to +125˚C)	4.95	4.49	3.95
23528CP	LM311N*	DIP-8	Voltage comparator	.35	.25	.19
23608CP	LM318N	DIP-8	Precision hi-speed op amp.	.55	.52	.45
23632CP	LM319N	DIP-14	Hi-speed dual comparator	.45	.40	.31
23667CP	LM323K	TO-3/2	5V 3A positive reg.	3.19	2.78	2.12
212169CP	LM324AN	DIP-14	Low power quad op amp.	.20	.19	.16
23683CP	LM324N**	DIP-14	Low power quad op amp. (ULN4336)	.29	.25	.22
192559CP	LP324N	DIP-14	Micropower quad op amp.	1.39	.99	.75
23721CP	LM331N	DIP-8	Prec. volt to freq. converter (150ppm/°C)	2.95	2.25	1.55
23739CP	LM334Z	TO-92	Adjust current source	.69	.62	.46
120820CP	LM335AZ	TO-92	Precision temperature sensor	2.95	2.19	1.49
23755CP	LM335Z	TO-92	Volt mode temperature sensor	.99	.75	.55
23771CP	LM336Z	TO-92	Voltage reference (2.5V)	.79	.69	.60
143888CP	LM339AN	DIP-14	Low power quad comparator	.18	.17	.155
23851CP	LM339N**	DIP-14	Quad comparator	.29	.25	.22
22904CP	LF347N	DIP-14	Quad JFET input op amp. (wide band)	.53	.48	.44
23915CP	LM348N	DIP-14	Quad 741 op amp. (UPC4741C)	.39	.29	.20
22912CP	LF351N	DIP-8	BIFET op amp.	.39	.37	.35
22939CP	LF353N*	DIP-8	Dual BIFET op amp. (comp. w/ TL082CP)	.39	.35	.29
22971CP	LF356N*	DIP-8	JFET input op amp. (wide band)	.79	.69	.59
120862CP	LM358AN	DIP-8	Low power dual op amp. (elect improv.)	.69	.59	.49
23966CP	LM358N*	DIP-8	Low power dual op amp.	.18	.13	.11
24037CP	LM380N	DIP-14	2-watt audio power amp.	.99	.75	.55
24088CP	LM383T	TO-220/5	7-watt audio high power amp.	5.95	5.39	4.95
24096CP	LM384N	DIP-14	5-watt audio amp.	1.75	1.55	1.35
120889CP	LM385BZ2.5	TO-92	Volt. ref. diode (2.5V±1.5%)	1.35	1.23	1.10
24109CP	LM385Z	TO-92	Volt. ref. diode (2.5V±3%)	.49	.45	.36
24117CP	LM385Z1.2	TO-92	Micropower volt. ref. diode (1.2V)	.52	.48	.36
24125CP	LM386N-1*	DIP-8	Low voltage audio amp. 250mW/6V	.39	.35	.29
24133CP	LM386N-3*	DIP-8	Low voltage audio amp. 500mW/9V	.69	.59	.49
120900CP	LM392N	DIP-8	Low pwr. op amp./voltage comparator	.99	.89	.75
212177CP	LM393AN	DIP-8	Low pwr. low offset volt dual comparator	.20	.18	.145
24281CP	LM393N*	DIP-8	Dual comparator	.35	.29	.25
23000CP	LF398N	DIP-8	Sample and hold circuit	1.69	1.29	.89
23018CP	LF411CN*	DIP-8	Low offset drift JFET input op amp.	.79	.69	.59
23026CP	LF412CN*	DIP-8	Low offset drift JFET input dual op amp.	1.45	1.05	.71
33347CP	TL431CLP	TO-92	Program precision reference	.25	.19	.13
106681CP	LF442CN	DIP-8	Dual low power JFET input op amp.	.76	.67	.51
119992CP	LF444CN	DIP-14	Quad low power JFET input op amp.	.74	.65	.52
119984CP	LF444ACN	DIP-14	Quad low power JFET input op amp.	3.95	2.99	2.29
33355CP	TL494CN	DIP-16	Control. ckt. pulse width modulated	.79	.59	.41
27422CP	LM555CN**	DIP-8	Timer (MC1455P/NE555V)	.29	.25	.19
126797CP	LMC555CN*	DIP-8	CMOS 555 timer	.54	.49	.44
34930CP	XRL555	DIP-8	Micro power 555 timer	.89	.79	.69
24328CP	LM556N*	DIP-14	Dual 555 timer (MC3456P)	.49	.45	.39
27457CP	NE558N	DIP-16	Quad timer (NE558C)	.69	.52	.36
27473CP	NE564N	DIP-16	High frequency phase locked loop	1.95	1.49	1.05
24352CP	LM565N	DIP-14	Phased locked loop	1.49	1.29	1.19
24395CP	LM567V	DIP-8	Tone decoder	.49	.40	.37
27490CP	NE571N	DIP-16	Compander, subscriber	3.29	2.99	2.49
115174CP	AD620AN	DIP-8	Low cost instrument amplifier	17.95	15.95	14.35
115182CP	AD633JN	DIP-8	Low cost analog multiplier	12.95	9.69	7.69
143976CP	LMC660CN	DIP-14	CMOS quad operational amp.	1.55	1.39	1.25
120926CP	LM675T	TO-220/5	Power op amp.	6.95	6.25	5.49
214041CP	TL712CP	DIP-8	Differential comparator	1.10	.89	.67
24483CP	LM725CN	DIP-8	Instrumentation op amp.	2.75	2.09	1.45

*10 pcs. in Linear series IC cabinet kit, pg 106   **20 pcs. in Linear series IC cabinet kit, pg 106
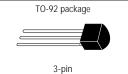
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TO-3 package	TO-5 package	TO-92 package	TO-220 package	DIP package
2 or 4-pin	8-pin	3-pin	3, 5 or 11-pin	8, 10, 14, 16, 18, 20, 24 and 28-pin

Linear Series (Continued)   Package (See above)
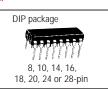
Part No.	Cross Ref.	Pkg.	Description	1	10	100
24491CP	LM733CN	DIP-14	Differential amp.	$.99	$.89	$.79
24521CP	LM741CH	TO-5/8	Op amp.	2.49	1.99	1.79
24539CP	LM741CN**	DIP-8	Op amp. (ULN2151)	.29	.25	.19
24563CP	LM747CN	DIP-14	Dual 741 op amp.	3.65	2.78	2.15
143896CP	LM837N	DIP-14	Low-noise quad operational amp.	1.49	1.35	1.19
25435CP	MC846P	DIP-14	Quad 2-input gate	3.95	2.95	1.95
192292CP	LM1086CTADJ	TO-220/3	1.5A low drop out positive regulator..........	1.49	1.09	.85
192305CP	LM1086CT-3.3	TO-220/3	1.5A low drop out positive regulator (3.3V)	1.49	1.09	.85
192313CP	LM1086CT-5.0	TO-220/3	1.5A low drop out positive reg. (5V)	1.49	1.09	.85
119706CP	LM1203N	DIP-28	RGB video amp system	1.49	1.39	1.19
24942CP	MC1350P	DIP-8	Video IF amp (12V operation)	1.29	1.19	1.09
23131CP	LM1458N*	DIP-8	Dual op amp. (RC4558)	.29	.26	.22
23157CP	LM1488N*	DIP-14	Quad line driver RS-232 (75188)	.29	.25	.22
16361CP	DS14C88N	DIP-14	Quad CMOS line driver (RS232)	.59	.49	.45
23181CP	LM1489N*	DIP-14	Quad line rec. RS-232 (75189)	.24	.20	.18
16379CP	DS14C89N	DIP-14	Quad CMOS line rec. (RS-232)	.65	.55	.45
118578CP	MC1495L	DIP-14	Linear four quadrant multiplier	9.95	8.95	8.05
23211CP	LM1496N	DIP-14	Balanced mod./demodulator (MC1496P)	.79	.59	.49
23270CP	LM1875T	TO-220/5	20-watt power audio amp.	2.25	1.95	1.75
23288CP	LM1877N-9	DIP-14	Dual power audio amp.	1.55	1.19	.81
107140CP	LM1881N	DIP-8	Video synchronous separator	2.49	1.99	1.49
32897CP	TDA2002V	TO-220/5	8-watt audio high power amp.	2.95	2.25	1.55
34278CP	ULN2003A*	DIP-16	Hi-volt/curr. darl. transistor array	.39	.35	.29
34294CP	ULN2004A	DIP-16	Hi-volt/curr. darl. trans. array (XR2204CP)	.32	.24	.17
34972CP	XR2206	DIP-16	Monolithic function generator	3.59	3.29	2.99
34999CP	XR2211	DIP-14	FSK demodulator/tone decoder	1.79	1.59	1.39
192321CP	LM2574HVN-ADJ	DIP-8	Simple Switcher 0.5A step down volt. reg.	2.49	2.25	2.25
192330CP	LM2574HVN-5.0	DIP-8	Simple Switcher 0.5A step down volt. reg.	3.49	2.99	2.44
156566CP	LM2574N-5	DIP-8	Step-down 5-voltage regulator	2.49	2.19	1.95
192364CP	LM2575N-12	DIP-16	Simple Switcher 1A step down volt. reg. ..	1.65	1.55	1.39
192372CP	LM2576HVT-ADJ	TO-220/5	Simple Switcher 3A step down volt. reg. ..	5.95	4.49	3.49
192381CP	LM2576HVT-5.0	TO-220/5	Simple Switcher 3A step down volt. reg. ..	5.95	4.49	3.15
192399CP	LM2576HVT-12	TO-220/5	Simple Switcher 3A step down volt. reg. ..	5.95	4.49	3.15
192401CP	LM2576HVT-15	TO-220/5	Simple Switcher 3A step down volt. reg. ..	3.65	3.55	3.49
192410CP	LM2587T-ADJ	TO-220/5	Simple Switcher 5A flyback regulator	7.45	5.85	4.75
192428CP	LM2594N-ADJ	DIP-8	Simple Switcher pwr. conv. 150kHz 0.5A	2.79	2.49	2.19
192444CP	LM2595T-ADJ	TO-220/5	Simple Switcher pwr. conv. 150kHz 1A	2.99	2.49	2.49
192452CP	LM2595T-5.0	TO-220/5	Simple Switcher pwr. conv. 150kHz 1A	3.75	2.89	2.19
192461CP	LM2595T-12	TO-220/5	Simple Switcher pwr. conv. 150kHz 1A	2.19	1.99	1.99
39571CP	26LS30	DIP-16	Dual diff RS422 party line Qd RS423 line driv.	2.49	1.89	1.35
39589CP	26LS31	DIP-16	Quad diff line driver	.79	.69	.62
39600CP	26LS32	DIP-16	Quad diff line receiver	.59	.44	.34
34315CP	ULN2803A*	DIP-18	Hi-volt. hi-curr. darl. transistor array	.69	.59	.49
23296CP	LM2901N	DIP-14	Quad comparator	.39	.29	.20
57007CP	LM2902N	DIP-14	Low power quad op amp.	.25	.23	.20
23309CP	LM2903N	DIP-8	Low pwr. low offset volt dual comp.	.20	.17	.135
121005CP	LM2904N	DIP-8	Low power dual op amp.	.23	.22	.21
123625CP	LM2907N-8	DIP-8	Frequency to volt converter	1.95	1.75	1.55
23317CP	LM2907N	DIP-14	Frequency to volt converter	1.75	1.35	.92
23350CP	LM2917N-8	DIP-8	Frequency to volt converter	2.45	1.75	1.25
23341CP	LM2917N-14	DIP-14	Frequency to volt converter	1.75	1.49	1.29
107166CP	LM2936Z-5	TO-92	Ultra-low quiescent current 5V reg.	1.49	1.29	1.19
107182CP	LM2940CT-5	TO-220/3	5V low dropout reg. (max. 45Vin)	1.29	1.19	1.09
192495CP	LM2940CT-12	TO-220/3	12V low dropout reg. (max 45Vin)	1.39	1.19	.89
121064CP	LM2941CT	TO-220/5	1A low dropout adjustable reg. (45Vin)	1.05	.91	.75
23376CP	LM2941T	TO-220/5	1A low dropout adjustable reg. (60Vin)	1.79	1.35	.94
12079CP	CA3046N	DIP-14	NPN transistor array (ULN2046)	.49	.44	.39
12116CP	CA3080E	DIP-8	Op transconductance amp. (100135)	.65	.55	.46

*10 pcs. in Linear series IC cabinet kit, pg 106   **20 pcs. in Linear series IC cabinet kit, pg 106

Linear Series (Continued)   Package (See above)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
12124CP	CA3081N	DIP-16	Common emitter NPN array (ULN2081) ...	$.69	$.59	$.54
12159CP	CA3086N	DIP-14	Transistor array NPN (ULN2086)	.49	.45	.39
12183CP	CA3130E	DIP-8	CMOS op amp.	1.19	.89	.62
12204CP	CA3140E	DIP-8	Bi-MOS op amp.	.79	.71	.63
12239CP	CA3161E	DIP-16	BCD to 7-seg. decoder driver	2.19	1.95	1.75
12247CP	CA3162E	DIP-16	Dual slope & rate analog/digital convert ...	6.95	5.95	5.25
107238CP	LM3302N	DIP-14	Low pwr. low offset volt quad comp.	.20	.15	.11
212185CP	MC3303N	DIP-14	Quad bipolar op amp.	.45	.40	.35
24168CP	CA3401N	DIP-14	Quad amp (LM3900N) (221-235)	.79	.69	.62
212193CP	MC3403N	DIP-14	Quad bipolar op amp.	.35	.31	.27
25216CP	MC3479P	DIP-16	Biphase stepper motor driver	5.75	5.18	4.65
25232CP	MC3486P	DIP-16	Quad EIA-422/423 line rec. w/ 3-st. outputs	.59	.49	.45
25259CP	MC3487P	DIP-16	Quad EIA-422 line driver w/ 3-state outputs	.69	.52	.36
31974CP	SG3524	DIP-16	Regulating pulse width modulator	.65	.59	.51
126834CP	LM3876T	TO-220/11	40W high perf. audio amp. with mute	4.79	3.89	3.59
192516CP	LM3886T	TO-220/11	68W high perf. audio amp. with mute	5.19	3.95	2.95
24168CP	LM3900N	DIP-14	Quad amp. (CA3401)	.79	.69	.62
24230CP	LM3914N	DIP-18	Bar-graph display driver	2.25	2.02	1.82
24256CP	LM3915N	DIP-18	3 dB steps bar-graph disp. driver	2.49	1.99	1.55
24272CP	LM3916N	DIP-18	VU meter display driver	2.25	1.95	1.75
192524CP	LM3940IT-3.3	TO-220/3	1A low dropout reg. for 5V to 3.3V conv.	2.39	1.69	1.29
25275CP	MC4044P	DIP-14	Frequency phase detector (11C44)	9.99	7.49	5.25
29356CP	RC4136N	DIP-14	Quad op amp (XR4136)	.85	.77	.65
29372CP	RC4151NB	DIP-8	Volt to freq. converter (XR4151)	1.29	1.19	1.09
27385CP	NE5532*	DIP-8	Dual low noise op amp.	.69	.59	.49
27406CP	NE5534	DIP-8	Low noise op amp.	.79	.69	.59
192541CP	LMC6032IN	DIP-8	CMOS dual op amp.	.99	.75	.55
43801CP	7217AIPI	DIP-28	4-digit LED up/down cntr. (com. cathode)	11.95	10.75	9.69
51140CP	7555IPA	DIP-8	CMOS timer (LM555CN)	.59	.49	.45
51174CP	7660CPA	DIP-8	CMOS volt convrtr. (+5 to ±5V) (M660AN)	1.19	.89	.62
51879CP	8038CCPD	DIP-14	Precision wave form generator	3.19	2.39	1.69
213170CP	UA9636A	DIP-8	Dual differential line receiver (MC3488A)	.99	.89	.79
192532CP	LM13700N	DIP-16	Dual op transcon. amp. w/ diodes & buffer	1.65	1.19	.89
25021CP	MC14411P	DIP-24	Bit rate frequency generator	6.95	5.35	3.75
25064CP	MC14490P	DIP-16	Hex contact bounce eliminator	6.95	6.25	5.59
50884CP	75154	DIP-16	Quad line receiver	.79	.59	.41
50930CP	75173	DIP-16	Quadruple differ. line receiver	1.99	1.59	1.29
50948CP	75174	DIP-16	Quad diff. RS-422 line driver w/ 3-state out	1.08	.99	.88
50956CP	75175	DIP-16	Quad diff. EIA 422A/423A line rec. w/3-st.out	1.05	.80	.70
50964CP	75176	DIP-8	Differential bus transceiver	.89	.67	.47
23157CP	75188	DIP-14	Quad line driver RS-232 (LM1488N)	.29	.25	.22
23181CP	75189	DIP-14	Quad line rec. RS-232 (LM1489N)	.24	.20	.18
51027CP	75451	DIP-8	Dual peripheral AND driver	.49	.44	.39
51035CP	75452	DIP-8	Dual peripheral NAND driver	.45	.34	.24
51131CP	75492	DIP-14	Hex digit driver (492)	6.95	6.25	5.95
118586CP	MC145151P	DIP-28	Parallel input PLL freq. synthesizer	5.95	5.39	4.85
25099CP	MC145406P	DIP-16	RS232-C/V.28 driv./rec. (CMOS) (75C1406N)	1.95	1.75	1.59
25101CP	MC146818	DIP-24	Real time clock plus RAM	4.95	3.75	2.95

*10 pcs. in Linear series IC cabinet kit, pg 106

JAMECO

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EPSON Real Time Clock Modules Dual-In-Line

RTC58321B: 16-Pin Clock Module
- Frequency stability: ±50ppm • Built-in 32.768kHz quartz crystal
- Addressable counter start, stop, and reset function • 12 or 24-hour format
- Automatic leap year setting • Microprocessor compatible 4-bit data bus

Part No.	Product No.	Description	1	10	50
29591CP	RTC58321B	16-pin clock module	$7.39	$6.15	$5.49

RTC72421B: 18-Pin Clock Module
- Frequency stability: ±50ppm • Built-in quartz crystal makes board design easy
- Direct bus-compatibility (120 nsec access time) • Interrupt masking
- 30 seconds error adjustment function

Part No.	Product No.	Description	1	10	50
95530CP	RTC72421B	18-pin clock module	$6.49	$5.69	$4.99

DALLAS SEMICONDUCTOR Dallas Semiconductor Dual-In-Line

Part No.	Product No.	Pins	Description	1	10	100
114198CP	DS1210	8	Nonvolatile controller chip	$3.95	$3.59	$3.25
114219CP	DS1213C	28	SmartSocket 64K/256k	13.95	12.95	11.65
133410CP	DS1216C	28	Smartwatch/RAM 64K/256k	29.49	27.39	16.45
114260CP	DS1220Y-150	24	16k nonvol. SRAM 10%pwr, 4.25V WP	11.95	10.95	9.85
114278CP	DS1225AB-150	28	64k nonvol. SRAM 5%pwr, 4.62V WP	16.39	12.95	8.75
114286CP	DS1225AD-150	28	64k nonvol. SRAM 10%pwr, 4.37V WP ...	11.95	10.95	9.85
114307CP	DS1225Y-200	28	64k nonvol. SRAM 10%pwr, 4.25V WP	15.95	14.49	11.65
177113CP	DS1230Y-100	28	256k nonvol. SRAM 10%pwr, 4.37V WP	19.99	17.99	15.99
114323CP	DS1230Y-150	28	256k nonvol. SRAM 10%pwr, 4.37V WP ..	19.95	15.95	11.95
114331CP	DS1232	8	Micromonitor chip	2.16	1.95	1.75
133444CP	DS1286	28	Watchdog timekeeper (50-Byte RAM)	19.95	17.95	11.70
76646CP	DS1287	24	Real time clock with RAM (MC146818A)	5.95	4.49	3.15
176778CP	DS1302	8	Trickle charge time keeping IC	2.49	2.25	2.05
114374CP	DS1387	24	RAMified real time clock 4kx8	8.95	8.15	7.25
114382CP	DS1620	8	Digital thermometer and thermostat	5.49	4.95	3.89
133452CP	DS12887	24	Real time clock chip	6.95	6.25	5.65
114403CP	DS80C320-MCG	40	High speed micro 25MHz	14.95	7.65	7.39

5000 Series and Clock Chips Dual-In-Line

Part No.	Cross Ref.	Pins	Description	1	10	50
32803CP	TCM5089N	16	Integrated tone dialer chip	$4.95	$4.49	$4.05
26091CP	MM5321N	16	TV camera synchronous generator	7.95	5.99	4.19
26083CP	MM5314N	24	6-digit LED/incandescent readout clock chip	14.95	13.49	11.95
26171CP	MM5450N	40	34-segment LED display driver	4.95	4.49	4.05
26201CP	MM58167AN	24	Microprocessor real time clock	4.95	3.75	2.65
29591CP	RTC58321B	16	Real time clock module (see above)	7.39	6.15	5.49
95530CP	RTC72421B	18	Real time clock module (see above)	6.49	5.69	4.99

Voltage Regulators

Package (see opposite page)

Part No.	Cross Ref.	Pkg.	Description	1	10	100
23499CP	LM309K	TO-3/2	5V 1A regulator (0°C to +125°C)	$4.95	$4.49	$3.95
192268CP	LM317AT	TO-220/3	3-terminal adjustable reg. (1.2V-37V)	1.95	1.49	1.09
192276CP	LM317HVT	TO-220/3	3-terminal adjustable reg. (1.2V-57V)	2.75	2.05	1.49
23544CP	LM317K	TO-3/2	1.5A adj. pos. reg. (1.2V-37V)	1.89	1.45	1.25
23552CP	LM317LZ	TO-92	100mA adj. pos. reg. (1.2V-37V)	.49	.39	.29
23579CP	LM317T**	TO-220/3	1.5A adj. pos. reg. (1.2V-37V)	.49	.44	.39
23798CP	LM337K	TO-3/2	1.5A/3 term. adj. neg. reg.	3.49	2.65	1.85
23819CP	LM337T*	TO-220/3	1.5A/adj. neg. reg. (-1.2V-37V)	.79	.69	.59
23835CP	LM338K	TO-3/2	5A adj. pos. reg. (1.2V-32V)	3.95	3.59	3.25
192284CP	LM338T	TO-220/3	5A adjustable regulator	2.59	1.95	1.45
23931CP	LM350K	TO-3/2	3A/3 term. adj. pos. reg. (1.2V-33V)	3.95	3.59	3.25
23940CP	LM350T	TO-220/3	3 amp. adj. power regulator	1.75	1.55	1.35
24467CP	LM723CN*	DIP-14	Voltage regulator (2V-37V)	.39	.29	.20
51182CP	78L05**	TO-92	5V 100mA pos. voltage regulator	.29	.26	.23
192225CP	78L09	TO-92	9V 100mA pos. voltage regulator	.29	.26	.23
51203CP	78L12*	TO-92	12V 100mA pos. voltage regulator	.29	.22	.15
194669CP	78L24	TO-92	24V 100mA pos. voltage regulator	.29	.22	.15
192233CP	78M05	TO-220/3	5V 500mA pos. voltage regulator	.35	.26	.18
192241CP	78M12	TO-220/3	12V 500mA pos. voltage regulator	.35	.32	.28
192250CP	78M15	TO-220/3	15V 500mA pos. voltage regulator	.35	.26	.18
51238CP	78S40	DIP-16	1.25V-40V 1.5A switching regulator	1.75	1.35	.92
51246CP	7805K	TO-3/2	5V 1A pos. voltage reg. (LM340K-5)	1.49	1.39	1.29
51318CP	7812K	TO-3/2	12V 1A pos. voltage reg. (LM340K-12)	1.49	1.39	1.29
51369CP	7815K	TO-3/2	15V 1A pos. voltage reg. (LM340K-15)	1.49	1.39	1.29
51262CP	7805T**	TO-220/3	5V 1A pos. voltage reg. (LM340T-5)	.35	.32	.28
51297CP	7806T	TO-220/3	6V 1A pos. voltage reg. (LM340T-6)	.35	.31	.27
51300CP	7808T*	TO-220/3	8V 1A pos. voltage reg. (LM340T-8)	.35	.31	.27
51334CP	7812T**	TO-220/3	12V 1A pos. voltage reg. (LM340T-12)	.35	.31	.27
51377CP	7815T*	TO-220/3	15V 1A pos. voltage reg. (LM340T-15)	.35	.31	.27
194634CP	7818T	TO-220/3	18V 1A pos. voltage reg. (LM340T-18)	.35	.31	.27
51414CP	7824T	TO-220/3	24V 1A pos. voltage reg. (LM340T-24)	.35	.31	.27
51422CP	79L05	TO-92	5V 100mA neg. voltage regulator	.25	.22	.19
51431CP	79L12	TO-92	12V 100mA neg. voltage regulator	.28	.25	.23
194749CP	79L15	TO-92	15V 100mA neg. voltage regulator	.29	.25	.23
194757CP	79L18	TO-92	18V 100mA neg. voltage regulator	.29	.15	.13
194765CP	79L24	TO-92	24V 100mA neg. voltage regulator	.29	.15	.13
51457CP	7905T*	TO-220/3	5V 1A neg. voltage reg. (LM320T-5)	.39	.29	.20
51481CP	7912T*	TO-220/3	12V 1A neg. voltage reg. (LM320T-12)	.39	.35	.29
51502CP	7915T*	TO-220/3	15V 1A neg. voltage reg. (LM320T-15)	.39	.35	.29
194714CP	7918T	TO-220/3	18V 1A neg. voltage reg. (LM320T-18)	.39	.29	.29

*10 pieces included in Linear kit on page 106   **20 pieces included in Linear kit on page 106

Rectifiers

Rectifiers

DO-5

DO-15/DO-27A/DO-41/
DO-201AD/DO-204AL

T6L

✻Prepackaged: order in
increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	1	10	100	1000
35924CP	1N1188	✦	DO-5	400 PRV, 35A	$2.89	$2.59	$2.35	$2.10
35975CP	1N4001	✦	DO-41	50 PRV, 1A	✻	.03	.025	.02
76961CP	1N4002	✦	DO-41	100 PRV, 1A	✻	.03	.025	.02
76970CP	1N4003	✦	DO-41	200 PRV, 1A	✻	.04	.025	.02
35991CP	1N4004	✦	DO-41	400 PRV, 1A	✻	.04	.025	.02
76988CP	1N4005	✦	DO-41	600 PRV, 1A	✻	.04	.025	.02
76996CP	1N4006	✦	DO-41	800 PRV, 1A	✻	.04	.03	.02
36011CP	1N4007	✦	DO-41	1000 PRV, 1A	✻	.04	.03	.025
214543CP	1N5399	✦	DO-15	1000 PRV, 1.5A	✻	.054	.038	.028
77075CP	1N5400	✦	DO-27A	50 PRV, 3A	✻	.15	.12	.06
36249CP	1N5401	✦	DO-27A	100 PIV, 3A	✻	.14	.11	.06
77083CP	1N5402	✦	DO-27A	200 PRV, 3A	✻	.11	.07	.06
36265CP	1N5404	✦	DO-27A	400 PRV, 3A	✻	.11	.07	.055
36273CP	1N5408	✦	DO-27A	1000 PRV, 3A	✻	.15	.11	.08

✦ Manufacturer varies

Rectifiers (Continued)

✻Prepackaged: order in
increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Description	1	10	100	1000
177949CP	1N5817	✦	DO-204AL	20 PIV, 1A	$.29	$.19	$.17	$.15
177957CP	1N5818	✦	DO-204AL	30 PIV, 1A	.24	.20	.16	.15
177965CP	1N5819	✦	DO-204AL	40 PIV, 1A	.29	.19	.17	.15
177973CP	1N5820	✦	DO-201AD	20 PIV, 3A	.39	.35	.29	.25
177981CP	1N5821	✦	DO-201AD	30 PIV, 3A	.39	.35	.29	.25
177990CP	1N5822	✦	DO-201AD	40 PIV, 3A	.49	.45	.39	.35
177754CP	T6A05L	✦	T6L	50 PIV, 6A	.31	.28	.25	.23
177762CP	T6A10L	✦	T6L	100 PIV, 6A	.29	.26	.22	.19
177818CP	T6A100L	✦	T6L	1000 PIV, 6A	.45	.39	.35	.29
177877CP	UF4001	✦	DO-41	50 PIV, 1A	✻	.09	.08	.07
177885CP	UF4002	✦	DO-41	100 PIV, 1A	✻	.09	.08	.07
177906CP	UF4004	✦	DO-41	400 PIV, 1A	✻	.09	.08	.07
177914CP	UF4005	✦	DO-41	600 PIV, 1A	✻	.09	.08	.07
177922CP	UF4006	✦	DO-41	800 PIV, 1A	✻	.09	.08	.07

✦ Manufacturer varies

Color Code Legend
New Sale Qty. Save Pull Closeout

Bridge Rectifiers

DF   KBP   W0G   W0M

BR8D   GBPC   MB35   TB35   179-01

Part No.	Product No.	Mfr.	Case*	Description	1	10	100	1000
178001CP	DF005M	◆	DF	50 PIV, 1A	$.35	$.30	$.27	$.24
103000CP	DF01M	◆	DF	100 PIV 1A	.39	.35	.29	.22
103042CP	DF02M	◆	DF	200 PIV, 1A	.31	.27	.21	.18
102971CP	DF04M	◆	DF	400 PIV, 1A	.29	.27	.25	.17
103034CP	DF06M	◆	DF	600 PIV, 1A	.35	.29	.23	.19
145429CP	KBP02M	◆	KBP	200 PIV, 1.5A	.49	.44	.39	.29
119562CP	KBP04M	◆	KBP	400 PIV, 1.5A	.49	.45	.36	.31
103018CP	W02G	◆	W0G	200 PIV, 1.5A	.32	.30	.22	.19
102980CP	W04G	◆	W0G	400 PIV, 1.5A	.49	.45	.39	.35
102998CP	W06G	◆	W0G	600 PIV, 1.5A	.45	.35	.25	.19
179469CP	W08G	◆	W0G	800 PIV, 1.5A	.69	.59	.49	.39
178124CP	W005M	◆	W0M	50 PIV, 1.5A	.49	.45	.39	.29
178132CP	W01M	◆	W0M	100 PIV, 1.5A	.32	.30	.22	.19
178141CP	W02M	◆	W0M	200 PIV, 1.5A	.49	.45	.39	.29
178175CP	W08M	◆	W0M	800 PIV, 1.5A	.69	.59	.49	.39
178183CP	BR805D	◆	BR8D	50 PIV, 2A	.55	.49	.39	.35
178204CP	BR82D	◆	BR8D	200 PIV, 2A	.85	.77	.69	.62
178247CP	BR810D	◆	BR8D	1000 PIV, 2A	.69	.59	.49	.39
179477CP	GBPC25-01	◆	GBPC	100 PIV, 25A	2.59	2.29	2.09	1.99
179485CP	GBPC25-02	◆	GBPC	200 PIV, 25A	2.79	2.29	1.79	1.49
178280CP	MB254	◆	MB35	400 PIV, 25A	2.49	2.19	1.89	1.69
178335CP	TB252	◆	TB35	200 PIV, 25A	2.10	1.85	1.69	1.50
178360CP	TB258	◆	TB35	800 PIV, 25A	2.25	1.99	1.79	1.61
178378CP	TB2510	◆	TB35	1000 PIV, 25A	3.75	3.35	2.99	2.69
25574CP	MDA990-3	◆	179-01	200 PIV, 30A	4.49	3.99	3.39	2.89
25591CP	MDA990-6	◆	179-01	600 PIV, 30A	4.95	4.49	3.99	3.59
178386CP	MB3505	◆	MB35	50 PIV, 35A	2.39	2.10	1.89	1.69
178431CP	MB358	◆	MB35	800 PIV, 35A	2.95	2.74	2.47	2.22
178440CP	TB3505	◆	TB35	50 PIV, 35A	2.39	2.10	1.89	1.69
178458CP	TB351	◆	TB35	100 PIV, 35A	2.39	2.10	1.89	1.69
178503CP	TB3510	◆	TB35	1000 PIV, 35A	3.29	2.99	2.65	2.29

◆ Manufacturer varies

* DF/KBP/W0G/W0M/179-01 – plastic case; GBPC/TB35 – plastic case, metal base; MB35 – metal case

Triacs

TO-225AA   TO-220/AB

Part No.	Prod. No.	Mfr.	Case	Description	1	10	100	1000
140425CP	2N6071A	◆	TO-225AA	200 V$_{DRM}$, 4A	$.69	$.59	$.49	$.45
31819CP	SC146B	◆	TO-220	200 V$_{DRM}$, 10A (2N6342)	1.69	1.52	1.37	1.23
31827CP	SC146M	◆	TO-220	600 V$_{DRM}$, 10A (2N6344)	1.99	1.69	1.49	1.29
139336CP	Q4015L5	◆	TO-220AB	400 V$_{DRM}$, 15A	1.75	1.59	1.35	.99

Transient Voltage Suppressors

SALE

CA: Bidirectional
A: Unidirectional

1.5KE/DO-15

* Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Min Brkdwn Volt (V$_{BR}$)	Stand-off Voltage	1	10	100	1000
103106CP	1.5KE15CA	◆	1.5KE	14.3	12.8	$.59	$.55	$.49	$.41
179557CP	1.5KE18A	GSI	1.5KE	17.1	15.3	.45	.41	.37	.30
179629CP	1.5KE43CA	GSI	1.5KE	40.9	36.8	.29	.26	.23	.21
179661CP	1.5KE6.8CA	GSI	1.5KE	6.45	5.8	.39	.36	.32	.29
179717CP	P6KE15CA	GSI	DO-15	14.3	12.8	.18	.17	.15	.14
179733CP	P6KE16CA	GSI	DO-15	15.2	13.3	.19	.18	.16	.15
179741CP	P6KE18A	GSI	DO-15	17.1	15.3	.25	.21	.19	.17
179768CP	P6KE200CA	GSI	DO-15	190	171	.35	.29	.25	.22
179792CP	P6KE33CA	GSI	DO-15	31.4	28.2	.35	.29	.26	.23
179805CP	P6KE39A	GSI	DO-15	37.1	33.3	*	.19	.17	.14
179813CP	P6KE43CA	GSI	DO-15	40.9	36.8	*	.17	.15	.14
179821CP	P6KE6.8A	GSI	DO-15	6.45	5.8	*	.14	.12	.17

◆ Manufacturer varies   GSI = General Semiconductor

Silicon Controlled Rectifiers (SCR)

TO-92   TO-202   TO-220/AB   TO-65

* Prepackaged: order in increments of 10, 100 or 1000

Part No.	Prod. No.	Mfr.	Case	Description	1	10	100	1000
119802CP	2N5060	◆	TO-92	25 PRV, 0.8A	$.35	$.32	$.29	$.22
211422CP	2N5061	◆	TO-92	60 PRV, 0.8A	*	.18	.135	.114
120070CP	2N5062	◆	TO-92	100 PRV, 0.8A	.39	.35	.29	.23
211431CP	2N5064	◆	TO-92	200 PRV, 0.8A	*	.22	.17	.125
140417CP	2N6507	◆	TO-220AB	400 PRV, 25A	1.59	1.45	1.29	1.15
14736CP	C106B1	◆	TO-202	200 PRV, 4A (2N6239)*	.59	.52	.40	.36
14752CP	C122B	◆	TO-220	200 PRV, 8A*	.99	.89	.79	.65
14761CP	C122M	◆	TO-220	600 PRV, 8A*	1.35	1.09	.81	.57
14859CP	C38M	◆	TO-65	600 PRV, 35A (2N3899)	5.99	5.39	4.85	4.39

*Isolated

Any Diode can be special order in ammo-style tape – 1000 piece minimum

Zener Diodes

SALE

DO-35/DO-41   Prepackaged: order in increments of 10, 100 or 1000

Part No.	Prod. No.	Mfr.	Case	Description	10	100	500	1000
36290CP	1N751	◆	DO-35	5.1V, 0.5W	$.09	$.06	$.05	$.04
178765CP	1N4730A	VSH	DO-41	3.9V, 1W	.09	.06	.05	.04
178773CP	1N4732A	VSH	DO-41	4.7V, 1W	.09	.06	.05	.04
36089CP	1N4732A	◆	DO-41	4.7V, 1W	.09	.06	.05	.04
178781CP	1N4733A	VSH	DO-41	5.1V, 1W	.09	.06	.05	.04
36097CP	1N4733A	◆	DO-41	5.1V, 1W	.09	.06	.05	.04
178790CP	1N4734A	VSH	DO-41	5.6V, 1W	.09	.06	.05	.04
36118CP	1N4734A	◆	DO-41	5.6V, 1W	.09	.06	.05	.04
178802CP	1N4735A	VSH	DO-41	6.2V, 1W	.09	.06	.05	.04
36126CP	1N4735A	◆	DO-41	6.2V, 1W	.09	.06	.05	.04
178811CP	1N4737A	VSH	DO-41	7.5V, 1W	.09	.06	.05	.04
178829CP	1N4738A	VSH	DO-41	8.2V, 1W	.09	.06	.05	.04
178837CP	1N4739A	VSH	DO-41	9.1V, 1W	.09	.06	.05	.04
178845CP	1N4740A	VSH	DO-41	10V, 1W	.09	.06	.05	.04
178853CP	1N4742A	VSH	DO-41	12V, 1W	.09	.06	.05	.04
36169CP	1N4742A	◆	DO-41	12V, 1W	.09	.06	.05	.04
178861CP	1N4744A	VSH	DO-41	15V, 1W	.09	.06	.05	.04
36185CP	1N4744A	◆	DO-41	15V, 1W	.09	.06	.05	.04
178870CP	1N4746A	VSH	DO-41	18V, 1W	.09	.06	.05	.04
178888CP	1N4747A	VSH	DO-41	20V, 1W	.09	.06	.05	.04
178896CP	1N4748A	VSH	DO-41	22V, 1W	.09	.06	.05	.04
178909CP	1N4749A	VSH	DO-41	24V, 1W	.09	.06	.05	.04
183450CP	1N4750A	◆	DO-41	27V, 1W	.09	.06	.05	.04
179004CP	1N5225B	VSH	DO-35	3.0V, 0.5W	.04	.035	.03	.027
179021CP	1N5229B	VSH	DO-35	4.3V, 0.5W	.04	.035	.03	.027
179039CP	1N5230B	VSH	DO-35	4.7V, 0.5W	.04	.035	.03	.027
179047CP	1N5231B	VSH	DO-35	5.1V, 0.5W	.04	.035	.03	.027
179055CP	1N5232B	VSH	DO-35	5.6V, 0.5W	.04	.035	.03	.027
179063CP	1N5234B	VSH	DO-35	6.2V, 0.5W	.04	.035	.03	.027
179071CP	1N5239B	VSH	DO-35	9.1V, 0.5W	.04	.035	.03	.027
179080CP	1N5241B	VSH	DO-35	11V, 0.5W	.04	.035	.03	.027
179098CP	1N5242B	VSH	DO-35	12V, 0.5W	.04	.035	.03	.027
179101CP	1N5245B	VSH	DO-35	15V, 0.5W	.04	.035	.03	.027
179119CP	1N5246B	VSH	DO-35	16V, 0.5W	.04	.035	.03	.027
179127CP	1N5248B	VSH	DO-35	18V, 0.5W	.04	.035	.03	.027
179135CP	1N5250B	VSH	DO-35	20V, 0.5W	.04	.035	.03	.027

Diodes

151247CP   DO-7/DO-35

* Prepackaged: order in increments of 10, 100 or 1000

Part No.	Prod. No.	Mfr.	Case	Description	1	10	100	1000
35941CP	1N270	VSH	DO-7	80 PRV (Germanium)	$.75	$.69	$.59	$.49
179207CP	1N914	VSH	DO-35	100 PRV (Switching)	*	.06	.05	.04
36311CP	1N914	◆	DO-35	75 PRV, .01A (Switching)	*	.027	.017	.009
35967CP	1N3600	◆	DO-35	50 PRV, .20A (Switching)	*	.12	.10	.08
179215CP	1N4148	VSH	DO-35	100 PRV (Switching))	*	.05	.04	.02
36038CP	1N4148	◆	DO-35	75 PRV, .01A (Switching)	*	.04	.03	.025
151247CP	1N4148T	◆	DO-35	75 PRV, .01A (Switching)	#	#	#	.02

◆ Manufacturer varies   VSH = Vishay   # Taped-ammo style: order in increments of 1000

See page 80 for Surface Mount Transistors.

Call for pricing on quantities over 5000 – we carry major manufacturers.

Any transistor may be supplied in ammo style tape by special order – 1000 piece min.

MOTOROLA   FAIRCHILD   SPRAGUE THE MARK OF RELIABILITY   Siliconix   SAMSUNG SEMICONDUCTOR   BOCA Semiconductor Corporation   National Semiconductor   TEXAS INSTRUMENTS

| 14-pin DIP | TO-3 | TO-18 | TO-39 | TO-72 | TO-92 | TO-126/TO-225 | TO-220 | TO-237 |

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Product No.	Mfr.	Case	Desc.	Vceo	Min. hFE @ Ic	1	10	100	1000
178677CP	KSP05	FSC	TO-92	NPN	60	50 @ 1A	✳	$.08	$.055	$.052
178706CP	KSP06	FSC	TO-92	NPN	80	50 @ 1A	✳	.07	.06	.055
26462CP	MPSA06	✦	TO-92	NPN	30	50 @ .01A	✳	.14	.12	.11
26489CP	MPSA13	✦	TO-92	NPN	30	5k @ .01A	✳	.11	.10	.09
210593CP	MPSA14	✦	TO-92	NPN	30	20k @ .10A	✳	.045	.032	.021
210681CP	MPSA18	✦	TO-92	NPN	45	500 @ .001A	✳	.052	.036	.024
33021CP	TIP29A	✦	TO-220	NPN	60	15 @ 1A	.49	.45	.41	.37
33030CP	TIP30A	✦	TO-220	PNP	60	15 @ 1A	.54	.50	.45	.37
179346CP	TIP30C	SAM	TO-220	PNP	100	15 @ 1A	.49	.45	.39	.35
33048CP	TIP31A	✦	TO-220	NPN	60	10 @ 3A	.49	.39	.35	.29
179354CP	TIP31C	SAM	TO-220	NPN	100	10 @ 3A	.49	.45	.39	.35
33064CP	TIP32A	✦	TO-220	PNP	60	10 @ 3A	.49	.44	.39	.36
181841CP	TIP32C	✦	TO-220	PNP	100	10 @ 3A	.49	.45	.39	.35
179371CP	TIP41C	SAM	TO-220	NPN	100	15 @ 3A	.65	.53	.45	.39
33081CP	TIP41A	✦	TO-220	NPN	60	15 @ 3A	.59	.47	.35	.25
178546CP	MPSA42	✦	TO-92	NPN	30	40 @ .03A	.22	.19	.15	.12
33101CP	TIP42A	✦	TO-220	PNP	60	15 @ 3A	.59	.49	.45	.39
139580CP	TIP42C	✦	TO-220	PNP	100	15 @ 3A	.49	.45	.39	.35
179389CP	TIP42C	SAM	TO-220	PNP	100	15 @ 3A	.55	.50	.45	.40
210606CP	MPSA56	✦	TO-92	PNP	80	100 @ .10A	✳	.049	.034	.024
210614CP	MPSA64	✦	TO-92	PNP	30	20k @ .10A	✳	.053	.035	.024
120221CP	BPW77	✦	TO-18	NPN	70	—	1.95	1.75	1.49	1.25
178554CP	MPSA92	✦	TO-92	PNP	300	25 @ .003A	✳	.069	.052	.033
214033CP	MPSA93	✦	TO-92	PNP	200	25 @ .03A	✳	.063	.049	.032
32977CP	TIP102	✦	TO-220	NPN	100	1k @ 3A	.43	.36	.28	.28
179240CP	TIP102	SAM	TO-220	NPN	100	1k @ 3A	.49	.45	.39	.38
32985CP	TIP106	✦	TO-220	PNP	80	1k @ 3A	.59	.54	.49	.39
179258CP	TIP107	SAM	TO-220	PNP	100	1k @ 3A	.69	.59	.54	.49
32993CP	TIP120	✦	TO-220	NPN	60	1k @ 3A	.54	.49	.43	.37
179291CP	TIP120	SAM	TO-220	NPN	60	1k @ 3A	.49	.45	.39	.35
120416CP	TIP122	✦	TO-220	NPN	100	1k @ 3A	.38	.32	.22	.17
179303CP	TIP122	SAM	TO-220	NPN	100	1k @ 3A	.49	.45	.39	.35
33013CP	TIP125	✦	TO-220	PNP	60	1k @ 3A	.59	.49	.45	.39
179320CP	TIP127	SAM	TO-220	PNP	100	1k @ 3A	.55	.49	.45	.41
211529CP	MJE340	✦	TO-225	NPN	300	30 @ .05A	.30	.28	.23	.216
211537CP	MJE350	✦	TO-225	PNP	300	30 @ .05A	.26	.25	.245	.235
211545CP	MJE700	✦	TO-225	PNP	60	750 @ 1.5A	.28	.25	.235	.228
211553CP	MJE800	✦	TO-225	NPN	60	750 @ 1.5A	.28	.25	.22	.205
194301CP	2N1711	✦	TO-39	NPN	35	100 @ .15A	.33	.29	.27	.24
194319CP	2N1893	✦	TO-39	NPN	80	40 @ .15A	.43	.39	.35	.32
194327CP	2N2102	✦	TO-39	NPN	65	40 @ .15A	.59	.53	.48	.43
38228CP	2N2219A	✦	TO-39	NPN	40	100 @ .15A	.59	.49	.45	.39
26446CP	MPQ2222	✦	DIP-14	NPN	40	100 @ .15A	2.25	1.95	1.79	1.65
210665CP	MPS2222	✦	TO-92	NPN	30	30 @ .50A	✳	.054	.038	.036
28628CP	PN2222	✦	TO-92	NPN	30	100 @ .15A	✳	.045	.027	.025
178722CP	KSP2222A	FSC	TO-92	NPN	40	100 @ .15A	✳	.10	.08	.06
210673CP	MPS2222A	✦	TO-92	NPN	40	40 @ .50A	✳	.07	.055	.045
178511CP	PN2222A	✦	TO-92	NPN	40	100 @ .15A	✳	.09	.06	.04
38236CP	2N2222A	✦	TO-18	NPN	40	100 @ .15A	.39	.35	.29	.25
26526CP	MPS2369	✦	TO-92	NPN	15	20 @ .10A	.29	.25	.18	.12
211334CP	MPS2369A	✦	TO-92	NPN	15	20 @ .10A	.29	.22	.17	.10
194343CP	2N2369A	✦	TO-18	NPN	15	40 @ .01A	.29	.26	.24	.24
194351CP	2N2484	✦	TO-18	NPN	60	250 @ .001A	.52	.47	.42	.38
194378CP	2N2905A	✦	TO-39	PNP	60	100 @ .15A	.55	.50	.45	.40
26454CP	MPQ2907	✦	DIP-14	PNP	40	100 @ .15A	1.49	1.34	1.19	1.09
28644CP	PN2907	✦	TO-92	PNP	40	100 @ .15A	✳	.13	.12	.11
211342CP	MPS2907A	✦	TO-92	PNP	60	100 @ .15A	✳	.063	.045	.035

Part No.	Product No.	Mfr.	Case	Desc.	Vceo	Min. hFE @ Ic	1	10	100	1000
178520CP	PN2907A	✦	TO-92	PNP	60	100 @ .15A	✳	$.09	$.06	$.04
38279CP	2N2907A	✦	TO-18	PNP	60	100 @ .15A	.36	.34	.31	.25
211377CP	TIP2955	✦	TO-220	PNP	60	5 @ .001A	1.15	1.05	.96	.78
211502CP	MJ2955A	✦	TO-3	NPN	60	20 @ 4A	1.07	1.00	.96	.78
25831CP	MJE2955T	✦	TO-220	PNP	60	20 @ 4A	.59	.47	.35	.29
38295CP	2N3053	✦	TO-39	NPN	40	25 @ .15A	.65	.59	.52	.46
211385CP	TIP3055	✦	TO-220	NPN	60	5 @ .001A	1.15	1.05	.96	.78
38308CP	2N3055	✦	TO-3	NPN	60	15 @ 10A	.89	.81	.71	.65
211406CP	2N3055A	✦	TO-3	NPN	60	20 @ 4A	1.18	1.15	1.13	1.03
25857CP	MJE3055T	✦	TO-220	NPN	60	20 @ 4A	.57	.51	.45	.40
194415CP	2N3439	✦	TO-39	NPN	350	40 @ .02A	.41	.37	.34	.34
194423CP	2N3440	✦	TO-39	NPN	250	40 @ .02A	.47	.42	.39	.35
194431CP	2N3501	✦	TO-39	NPN	150	100 @ .15A	1.15	1.05	.90	.85
194440CP	2N3637	✦	TO-39	PNP	175	100 @ .50A	.90	.85	.75	.69
211561CP	MPS3646	✦	TO-92	NPN	15	30 @ .003A	.29	.24	.19	.17
194458CP	2N3700	✦	TO-18	NPN	80	100 @ .15A	.59	.54	.46	.41
209242CP	2N3771	✦	TO-3	NPN	40	15 @ 15A	1.99	1.86	1.75	1.40
38324CP	2N3772	✦	TO-3	NPN	40	15 @ 10A	1.49	1.35	1.19	.99
140151CP	2N3773	✦	TO-3	NPN	140	15 @ 8A	2.49	1.99	1.49	1.26
62279CP	2N3903	✦	TO-92	NPN	40	50 @ .01A	✳	.045	.039	.025
211351CP	MPS3904	✦	TO-92	NPN	40	100 @ .001A	.29	.275	.26	.21
38359CP	2N3904	✦	TO-92	NPN	40	100 @ .01A	✳	.08	.06	.045
178597CP	2N3904	FSC	TO-92	NPN	40	100 @ .01A	✳	.09	.08	.07
62287CP	2N3905	✦	TO-92	PNP	40	50 @ .01A	✳	.054	.037	.024
211369CP	MPS3906	✦	TO-92	PNP	40	100 @ .001A	✳	.10	.08	.055
38375CP	2N3906	✦	TO-92	PNP	40	100 @ .01A	✳	.07	.05	.045
178618CP	2N3906	FSC	TO-92	PNP	40	100 @ .01A	✳	.09	.08	.07
194466CP	2N4033	✦	TO-39	PNP	80	100 @ .10A	.69	.59	.49	.39
38404CP	2N4123	✦	TO-92	NPN	30	25 @ .05A	✳	.059	.039	.025
62295	2N4124	✦	TO-92	NPN	25	60 @ .05A	✳	.059	.039	.025
194482CP	2N4235	✦	TO-39	PNP	60	30 @ .25A	1.49	1.15	.89	.75
38421CP	2N4401	✦	TO-92	NPN	40	100 @ .15A	✳	.07	.06	.05
38447CP	2N4403	✦	TO-92	PNP	40	100 @ .15A	✳	.08	.07	.05
211511CP	2N4410	✦	TO-92	NPN	80	60 @ .01A	✳	.06	.042	.032
211449CP	2N4918	✦	TO-225	PNP	40	30 @ .50A	.49	.45	.42	.37
211457CP	2N4919	✦	TO-225	PNP	60	30 @ .50A	.36	.34	.32	.30
211465CP	2N4920	✦	TO-225	PNP	80	30 @ .50A	.33	.315	.30	.29
211473CP	2N4921	✦	TO-225	NPN	40	30 @ .50A	.34	.33	.32	.31
211481CP	2N4922	✦	TO-225	NPN	60	30 @ .50A	.35	.33	.29	.265
214623CP	2N4126	✦	TO-92	PNP	25	60 @ .05A	✳	.054	.037	.024
211490CP	2N4923	✦	TO-225	NPN	80	30 @ .50A	.35	.31	.26	.24
194520CP	2N5038	✦	TO-3	NPN	90	50 @ 2A	2.89	2.75	2.69	2.65
210631CP	2N5087	✦	TO-92	PNP	50	250 @ .10A	✳	.055	.038	.028
62316CP	2N5088	✦	TO-92	NPN	30	300 @ .10A	✳	.055	.038	.025
62324CP	2N5089	✦	TO-92	NPN	25	400 @ .10A	✳	.055	.038	.027
140388CP	2N5109	✦	TO-39	NPN	20	40 @ .50A	1.45	1.29	1.17	1.05
38480CP	PN5179	✦	TO-92	NPN	15	25 @ .003A	1.19	.95	.71	.49
140373CP	2N5179	✦	TO-72	NPN	12	25 @ .003A	.69	.65	.59	.49
209251CP	2N5191	✦	TO-225	NPN	60	25 @ 1.5A	.45	.42	.39	.32
38498CP	2N5192	✦	TO-225	NPN	80	20 @ 1.5A	.35	.34	.31	.289
209269CP	2N5194	✦	TO-225	PNP	60	25 @ 1.5A	.33	.31	.295	.28
38501CP	2N5195	✦	TO-225	PNP	80	20 @ 1.5A	.47	.44	.40	.33
194538CP	2N5320	✦	TO-39	NPN	75	30 @ .50A	.60	.55	.49	.45
210649CP	2N5401	✦	TO-92	PNP	150	60 @ .01A	✳	.053	.044	.032
194546CP	2N5415	✦	TO-39	PNP	200	30 @ .05A	.63	.57	.51	.46
194554CP	2N5416	✦	TO-39	PNP	300	30 @ .05A	.79	.72	.64	.58
210657CP	2N5551	✦	TO-92	NPN	160	80 @ .01A	✳	.071	.045	.034

✦ Manufacturer varies   SAM = Samsung   FSC = Fairchild Semiconductor

Color Code Legend New Sale Qty. Save Closeout

See page 80 for Surface Mount Transistors.

Call for pricing on quantities over 5000 – we carry major manufacturers.

Transistors (Continued)

See previous page for Case lineart

Any transistor may be supplied in ammo style tape by special order – 1000 pcs. min.

Part No.	Product No.	Mfr.	Case	Desc.	Vceo	Min. h_{FE} @ Ic	1	10	100	1000
209277CP	2N5657	✦	TO-126	NPN	350	30 @ .10A	$.58	$.52	$.49	$.395
194562CP	2N5679	✦	TO-39	PNP	100	40 @ .25A	.79	.71	.65	.59
194571CP	2N6042	✦	TO-220	PNP	100	1k @ 3A	.65	.59	.51	.49
194589CP	2N6045	✦	TO-220	NPN	100	1k @ 3A	.99	.89	.80	.72
194597CP	2N6052	✦	TO-3	PNP	100	750 @ 6A	2.95	2.66	2.39	2.15
194600CP	2N6059	✦	TO-3	NPN	100	750 @ 6A	1.75	1.39	1.19	.99
194618CP	2N6547	✦	TO-3	NPN	400	12 @ 5A	4.99	4.49	3.99	3.99
194626CP	2N6678	✦	TO-3	NPN	400	8 @ 15A	6.25	5.63	5.06	4.56
140134CP	2N6725	✦	TO-237	NPN	50	25k @ .2A	.60	.55	.49	.44

✦ Manufacturer varies

J-FET

TO-72   TO-92

• TO-92 case (except P/N 38341CP: TO-72 case)

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Description	BV_{GS} (V)min @ IGuA	Idss (max) (mA) @ V_{DS}	VP (max) @ V_{DS}	1	10	100	1000
210622CP	2N3819	JFET (N-Ch)	25 @ 1	20 @ 15	—	✳	$.09	$.06	$.038
38341CP	2N3823	JFET (N-Ch)	30 @ 1	20 @ 15	8 @ 0.5	.79	.69	.59	.55
38527CP	2N5951	JFET (N-Ch)	30 @ 1	13 @ 15	5 @ 100	.99	.89	.79	.69
26403CP	MPF102	JFET (N-Ch)	25 @ 1	20 @ 15	4 @ 0.5	.26	.19	.14	.14
211393CP	J111	JFET (N-Ch)	35 @ 1	20 @ 15	—	.29	.22	.16	.11
140450CP	J112	JFET (N-Ch)	35 @ 1	5.0 @ 15	—	.29	.22	.16	.11
140142CP	J176	JFET (P-Ch)	30 @ 1	2 @ 25	4 @ -15	.59	.55	.49	.45
211414CP	J177	JFET (P-Ch)	30 @ 1	20 @ 15	—	.29	.22	.16	.11

Power Transistors

TO-18   TO-92

Part No.	Mfr.Cross Ref. No.	Case	Intrinsic Standoff ratio	Pk. Pt. Curr. (max)	Valley Pt. Curr. (min)	1	10	100	1000
194360CP	2N2647	TO-18	0.68 (min)	2.0µA	8.0mA	$1.59	$1.45	$1.35	$1.19
194511CP	2N4871	TO-92	0.70 (min)	5.0µA	4.0mA	1.35	1.25	1.15	1.05

N-Channel MOSFETs

TO-92   TO-220

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Prod. No.	Mfr.	Case	Drain Source Brkdwn Volt.	Min. On-State DS Current	1	10	100	1000
178669CP	2N7000	FSC	TO-92	60VDC	0.2A	✳	$.12	$.11	$.10
119423CP	2N7000	✦	TO-92	60VDC	0.3A	.21	.17	.12	.10
209058CP	BUZ72L	✦	TO-220	100VDC	10.0A	.69	.55	.45	.39
209234CP	IRF510	✦	TO-220	100VDC	5.6A	.53	.48	.39	.34
209226CP	IRF520	✦	TO-220	100VDC	10.0A	.55	.52	.48	.39
210500CP	IRF530	✦	TO-220	100VDC	14.0A	.70	.65	.60	.49
210518CP	IRF540	✦	TO-220	100VDC	27.0A	.81	.73	.54	.51
210526CP	IRF620	✦	TO-220	200VDC	6.0A	.44	.40	.32	.29
210534CP	IRF630	✦	TO-220	200VDC	9.0A	.65	.55	.45	.43
210542CP	IRF640	✦	TO-220	200VDC	18.0A	.99	.92	.85	.69
210551CP	IRF730	✦	TO-220	400VDC	5.5A	.79	.69	.56	.52
210569CP	IRF740	✦	TO-220	400VDC	10.0A	1.25	1.10	.89	.80
210577CP	IRF820	✦	TO-220	500VDC	4.0A	.65	.60	.55	.45
210585CP	IRF830	✦	TO-220	500VDC	4.5A	.77	.70	.62	.58
184719CP	IRF840	✦	TO-220	500VDC	8.0A	1.49	1.29	.99	.89

✦ Manufacturer varies   FSC = Fairchild Semiconductor

Heat Sinks

Heat Sink Compound

Thermally loaded silicone-based grease that improves transfer of energy across the metal to metal interface between transistor or rectifier to heat sink.

• Color: opaque white

167249CP

Part No.	Product No.	1	10	100
196752CP	THM249 (1 oz.)	$4.95	$4.49	$3.95
167249CP	THM250 (2 oz.)	9.95	8.99	8.09

TECHSPRAY
Heat Sink Compound 4-Oz. Tube

This silicone-free compound provides more effective heat transfer. Will not harden, dry out, melt, or contaminate wave-solder baths.

Part No.	Product No.	1	10
169252CP	1978DP	$17.95	$15.95

Heat Sink Mounting Kits

34121CP   34139CP

• TO-3 and TO-220 heat sink insulator assemblies
• 10 kits per pack

Part No.	Type	Description	1	10	100
34121CP	TO-220	5-piece kit	$3.95	$3.55	$3.19
34139CP	TO-3	12-piece kit	3.95	3.59	3.25

Thermalloy   IERC   ## Heat Sinks   AAVID   Wakefield

Our TO-3/TO-218/TO-220 heat sinks are made from black anodized aluminum (except for P/N 107297CP which is light weight aluminum). They can be mounted horizontally or vertically depending on your applications. P/N 164734CP and 163846CP have mounting clips and some can be mounted vertically with solderable mounting tabs.

16512CP   189835CP   151546CP   163846CP   .200" tabs (3)   42622CP

40504CP   158051CP   70914CP   70658CP   129242CP   107297CP   164734CP

Part No.	Mfr. Cross Reference No.	Type	Watts	Size (L" x W" x H")	1	10	100	1000
16512CP	DUDE4	TO-3	30.0	4.8 x 1.5 x 1.3	$2.95	$2.75	$2.49	$2.25
189835CP	635-5B2	TO-3	8.0	1.9 x 1.4 x 0.5	.95	.71	.55	.49
151546CP	635-125B2	TO-3	8.0	1.9 x 1.4 x 1.3	.99	.89	.67	.60
163846CP	THM7021B	TO-218/220	5.0	1.7 x 1.8 x 0.4	.59	.53	.48	.43
42622CP	6030B	TO-220	3.9	1.2 x 1.0 x 0.5	.35	.30	.26	.24
40504CP	291-36H	TO-220	2.0	0.9 x 1.0 x 0.4	.89	.79	.69	.59
158051CP	THM6078	TO-220	2.0	.75 x .52 x .38	.39	.35	.29	.25
70914CP	THM6106	TO-220	1.9	1.2 x 1.0 x 0.5	.36	.32	.27	.23
70658CP	THM6073	TO-220	1.6	0.8 x 0.7 x 0.4	.38	.27	.18	.14
129242CP	THM6106	TO-220	1.6	1.2 x 1.0 x 0.5	.49	.45	.39	.35
107297CP	PSC2-U (cup-style)	TO-220	1.5	0.8 x 1.0 x 0.4	.49	.45	.39	.35
164734CP	THM6072	TO-220	5.0	1.4 x 1.8 x 0.4	.59	.53	.48	.43

Jameco Special Values!

See the yellow & green highlighted items.   Details on page 4.
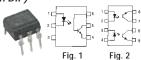
Photo Transistors *General Purpose (6-Pin DIP)*
Single & Dual Channel
- Base lead connected   • NPN output transistor
- ICEO (dark) Vce = 10V: 50nA max.
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Fig. 1   **Fig. 2**

Part No.	Mfr. Cross Ref. No.	Fig.	Curr. Transfer Ratio (Min%)	Cont. Fwd. Curr. Max.	VCE (Sat) Max. (V)	Pricing 1	10	100	500
40985CP	4N25	1	20	50mA	0.5	$.29	$.25	$.22	$.19
41005CP	4N26	1	20	50mA	(IF = 50mA)	.29	.25	.22	.19
144240CP	4N27	1	10	50mA	(Ic = 2mA)	.25	.19	.17	.15
41013CP	4N28	1	10	50mA		.27	.22	.16	.11
41056CP	4N35	1	100	50mA	0.3 (IF = 10mA) (Ic = 5.0mA)	.39	.35	.25	.16
24900CP	MCT2	1	20	50mA	0.4 (IF = 16mA) (Ic = 0.2mA)	.29	.24	.20	.20
24918CP*	MCT6	2	20	50mA	0.4 (IF = 16mA) (Ic = 0.2mA)	.49	.45	.39	.35

* 2 independant isolators in one package, 8-pin DIP

Photo Darlingtons *With Base Connection (6-Pin DIP)*
- Photo Darlington transistor detector base lead connected
- BVceo Ic =1mA: 30V min.
- Current transfer ratio IF=10mA VCE = 10V
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Part No.	Mfr. Cross Ref. No.	Curr. Transfer Ratio (Min%)	Cont. Fwd. Curr. Max.	VCE (Sat) Max. (V)	Pricing 1	10	100	500
41021CP	4N32	500	80mA	1.0 (IF = 8mA)	$.29	$.25	$.22	$.19
41030CP	4N33	500	80mA	(Ic = 2mA)	.29	.25	.22	.19

Schmitt Trigger *Single Channel (6-Pin DIP)*
- Microprocessor compatible
- Isolation test voltage: 7.5k V-P; 5.3k Vrms
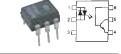
Part No.	Mfr. Cross Ref. No.	Threshold Current RL = 270Ω Vcc = 5V Turn-On (max)	Turn-Off (min)	Output Volt (low) RL=270Ω Vcc=5V Max. (V)	Pricing 1	10	100	500
113988CP	H11L1	1.6mA	0.3mA	0.4	$.89	$.79	$.69	$.59

AC Input Isolator *Single Channel (6-Pin DIP)*
- Isolation test voltage: 7.5k V-P; 5.3k Vrms
- VF (LED) IF =10mA: 1.5V max.
- BVCEO Ic = 1mA: 30V min.

Part No.	Mfr. Cross Ref. No.	Curr. Transfer Ratio (Min%)	Cont. Fwd. Curr. Max.	Vce (Sat) IF=10mA Ic=0.5mA	Pricing 1	10	100	500
18825CP	H11AA1	20	100mA	0.4V (max)	$.45	$.39	$.34	$.29

Transistor Slotted Interrupter *Single Channel (4-Pin Slot)*
- With mounting tabs
- VF = 1.7V max. @ 60mA

Part No.	Mfr. Cross Ref. No.	BVCEO Ic = 1mA	BVCEO IE = 100µA	ICEO (max) VCE = 25V Ih = 0	Pricing 1	10	100	500
114091CP	H21A1	30V min	6.0Vmin	100nA	$.83	$.75	$.62	$.56

FET Coupler *Single Channel (6-Pin DIP)*
- Optically coupled pair with symmetrical bilateral silicon detector
- On state resistance IF = 16mA; I46 = 100µA: 200Ω max.
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Part No.	Mfr. Cross Ref. No.	Output Brkdwn Volt. I46=10µA	Cont. Fwd. Curr. Max.	Off State Curr. I46 = 15V	Pricing 1	10	100	500
113996CP	H11F1	30V (min)	60mA	50nA (max)	$2.19	$1.75	$1.57	$1.41

Zero Crossing Triac Couplers *Single Channel (6-Pin DIP)*
- Performs the function of a zero voltage crossing bilateral triac driver
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Part No.	Mfr. Cross Ref. No.	Input Trig. Curr. VTM=3V (Max)	Cont. Fwd. Curr. Max.	Peak Block Volt. Min (V)	Pricing 1	10	100	500
26294CP	MOC3031	15mA	50mA	250	$1.19	$.95	$.71	$.60
113953CP	MOC3032	10mA	50mA	250	.95	.84	.76	.68
113961CP	MOC3042	10mA	50mA	400	.89	.81	.72	.65
133874CP	MOC3063	5mA	50mA	600	1.25	1.12	.99	.71

Transistor Couplers *Single Channel (8-Pin DIP)*
- Isolation voltage: 2.5k Vrms min.
- **42471CP:** High speed
- Propagation delay time tPHL: 0.8µs max.
- **113911CP:** Very high speed logic
- Propagation delay time tPHL: 75ns max.
- LSTTL/TTL compatible
- **42489CP:** High speed, high gain
- Propagation delay time tPHL: 10µs max.
- **113929CP:** High speed, high gain
- Propagation delay time tPHL: 25µs max.

42471CP   **113911CP**

42489CP/113929CP

Part No.	Mfr. Cross Ref. No.	Curr. Transfer Ratio (Min%)	Specified Input Curr.	Typical Data Rate (NRZ)	Pricing 1	10	100	500
42471CP	6N136	19	16mA	1Mbits/s	$.79	$.69	$.55	$.39
113911CP	6N137	700	5mA	10Mbits/s	.79	.69	.59	.49
42489CP	6N138	300	1.6mA	300kbits/s	.45	.41	.35	.31
113929CP	6N139	400	0.5mA	300kbits/s	.79	.69	.59	.43

Triac Couplers *Single Channel (6-Pin DIP)*
- Infrared emitter and light activated silicon bilateral switch
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Part No.	Mfr. Cross Ref. No.	Input Trig. Curr. VD=3V (Max)	Cont. Fwd. Curr. Max.	Peak Block Volt. Min (V)	Pricing 1	10	100	500
26278CP	MOC3010	15mA	60mA	250	$.49	$.45	$.39	$.35
95020CP	MOC3011	10mA	60mA	250	.55	.49	.45	.40
95038CP	MOC3021	15mA	60mA	400	.75	.69	.55	.45

ISOCOM Photo Transistor *Low Input (4-Pin DIP)*
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Part No.	Product No.	BVceo Ic=1mA	Curr.Trans.Ratio Min (%) VCE=0.4V IF=0.5/1mA	VBR IR = 10µA	Pricing 1	10	100	500
138069CP	ISP817-3	70V	70/100	10V	$.99	$.89	$.79	$.65

ISOCOM Transistor/Detector *Quad Channel (16-Pin DIP)*
- High Isolation voltage/CTR/sensitivity
- 4 independent isolators in one package
- Isolation test voltage: 7.5k V-P; 5.3k Vrms

Part No.	Product No.	Curr. Trans. Ratio (Min%) IF = 10mA VCE = 10V	Cont. Fwd. Curr. Max.	Pricing 1	10	100	500
114083CP	ISQ203	225-450	50mA	$2.95	$2.65	$2.39	$2.15

ISOCOM Photo Darlington & Transistor/Detector *(16-Pin DIP)*
- Isolation test voltage: 7.5k V-P; 5.3k Vrms
- NPN transistor
- 1.17VF @ 10mA (typical)
- Continuous forward current (max.): 50mA
- **160362CP:** Photo darlington
- **160338CP:** Photo transistor/detector
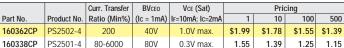
160362CP

160338CP

Part No.	Product No.	Curr. Transfer Ratio (Min%)	BVCEO (Ic = 1mA)	VCE (Sat) IF=10mA; Ic=2mA	Pricing 1	10	100	500
160362CP	PS2502-4	200	40V	1.0V max.	$1.99	$1.78	$1.55	$1.39
160338CP	PS2501-4	80-6000	80V	0.3V max.	1.55	1.39	1.25	1.15

Module Optical Switch
- Input diode: forward voltage (VF) – 1.60V max. (IF=20mA); reverse current (IR) – 10µA (VR = 5V) • Type N package
- Collector dark current (ICEO) – 100nA (VCE = 10V)
- C-E saturation voltage (VCE) (sat): 0.4V max. (Ic = 0.5mA; IF=20mA)

Part No.	Product No.	Dimensions	1	10	50
196058CP	ITR-8105	0.10"W x 0.22"D x 0.29"H	$1.95	$1.75	$1.59

optix Slotted Optical Switch
- Input diode: forward voltage (VF) – 1.60V (IF=10mA); reverse current (IR) – 100µA (VR = 3.0V) • Type N package
- Output phototransistor: breakdown voltage (VBR CEO) = 30V min.; collector-emitter dark current (ICEO) – 100nA (VCE = 5V)
- Coupled: saturation voltage (VSAT) – 0.40V (IF = 10mA; Ic=100µA) gap unblocked

Part No.	Product No.	Dimensions	1	10	50
189481CP	OPB660N	0.13"W x 0.26"D x 0.35"H	$2.95	$2.65	$2.39

Color Code Legend
New Sale Qty. Save Closeout

Crystals

Dimensions in millimeters

HC33/U Case — 19.68 MAX, 38.10, 0.75, 12.34, 19.23 MAX

HC49/U (HC18/U) Case — 13.46 MAX, 38.10, 0.43, 4.88, 11.05 MAX

TF Case — 3.1 Max, 8.3 Max, 9.0, 0.3, A, 1.1
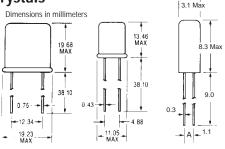
- Frequency calibration tolerance: ± 50ppm @ 25°C
- Operating temperature: -10°C to +60°C
- Drive level: 4.0 mW maximum
- Frequency stability tolerance: ±50 ppm from -10°C to +60°C
- Shunt capacitance: 7pF maximum
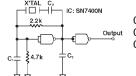
Application Reference (4~14MHz) (Parallel Resonance)

X'TAL C₃ IC: SN7400N 2.2k Output 4.7k

C1: 150-470 pF
C2: 220-820 pF
C3: Match crystal impedance

HC33/U Case

Part No.	Mfr. Cross Ref. No.	Frequency (MHz)	Impedance	Microprocessor	1	10	100	1000
					Pricing			
14349CP	CY1	1.0	13pF	MC6800/6808/6809E/6500 series	$4.95	$4.49	$3.95	$3.49
14357CP	CY1.84	1.8432	Series	MC14411/CDP1802/CDP1804	.69	.62	.55	.50

HC49/U (HC18/U) Case

Part No.	Mfr. Cross Ref. No.	Frequency (MHz)	Impedance	Microprocessor	1	10	100	1000
102613CP	CY1.843	1.8432	18pF	MC14411/MC6802	$.99	$.72	$.51	$.39
102621CP	CY2.0	2.0	Series	2650/F-8	1.49	1.25	.99	.75
101274CP	CY2.457	2.4576	32pF	CDP1702/1802C/1804/1804C	1.09	.98	.85	.75
14525CP	CY3.27	3.2768	18pF	IM6100C/CDP1802/CDP1804	.89	.79	.69	.59
14533CP	CY3.57	3.579545	18pF	MC6801,2,3/MM5369	.59	.54	.42	.39
14568CP	CY3.68	3.6864	18pF	8748/8035-8	.89	.79	.69	.59
14592CP	CY4	4.0	20pF	MCS-40/MC6802,8,9/CDP1802	.59	.54	.41	.39
14621CP	CY4.91	4.9152	Series	CDP1802C/1804/1804C	.89	.71	.53	.37
14681CP	CY6	6.0	18pF	MCS-48/IM8048	.79	.63	.47	.33
14699CP	CY6.14	6.144	30pF	MCS-85/8085	.79	.69	.55	.41
14710CP	CY7.37	7.3728	30pF	8051/8031	.89	.71	.53	.37
14728CP	CY8	8.0	Series	IM6100A/MC68B09	.74	.67	.60	.54
14381CP	CY10	10.0	Series	MCS-85/8085A-2	.79	.69	.59	.49
120061CP	CY11.05	11.0592	Series	General purpose	.89	.79	.69	.59
14402CP	CY12	12.0	Series	MCS-86/8086/8284/8202	.89	.72	.55	.39
14453CP	CY16	16.0	Series	8080/8224/general purpose	.62	.50	.37	.26
14517CP	CY20	20.0	Series	MCS-80/8080A/8224	.79	.69	.59	.39

TF Case

Part No.	Mfr. Cross Ref. No.	Frequency (MHz)	Impedance	Microprocessor	1	10	100	1000
14584CP	CY32.76	32.768kHz	10.5pF	Tuning fork	$.89	$.79	$.69	$.59

Low Profile Crystals

- Frequency range: 3.5 to 70.0MHz
- Operating temp.: -10°C to +60°C
- Drive level: 0.5mW (fundamental frequency)
- Aging: ±5ppm/year maximum
- Frequency stability tolerance: ±50ppm

HC49/S Case — 3.6 max., 13 max., .43, 5.1 max., 4.8, 11 max.

HC49/S Case (Low Profile)

Part No.	Mfr. Cross Ref. No.	Frequency (MHz)	Imped.	Max. Resist.	Microprocessor	1	10	100	1000
137816CP	CY3.57LP	3.579545	17pF	150Ω	MC6801, 2, 3/MM5369	$.95	$.81	$.65	$.59
137832CP	CY4LP	4.000	17pF	120Ω	MCS-40/MC6802, 8, 9/CDP1802	1.05	.85	.75	.65
137859CP	CY8LP	8.000	Series	60Ω	IM6100A/MC68B09	.75	.67	.59	.53
137875CP	CY11.05LP	11.0592	Series	50Ω	General purpose	.72	.65	.53	.42
137891CP	CY16LP	16.000	Series	40Ω	8080/8224/general purpose	.69	.62	.56	.51

TTL Crystal Oscillators

Pin #1 #7, 0.3", #14, #8, 0.6"

Full Can

Pin #	Function
1	N/C
7	GND
8	Output
14	+5VDC

Full Can

4.93, 6.4, 0.45 (4 Pins)

PIN 1, .30 Max. (7.62), .30 Max. (7.62)

Half Can

Pin #	Function
1	N/C
4	GND
5	Output
8	+5VDC

Half Can

102779CP

Specifications:
- Input voltage: +5VDC ±0.5VDC
- OSC series oscillators fit into a 14-pin DIP socket P/N 133006CP, below
- Frequency stability ±100ppm
- Operating temperature: 0°C to 70°C

Part No.	Mfr. Cross Ref. No.	Frequency (MHz)	Size	Max Input Current	Rise Fall Time	Input Current	1	10	100	1000
27861CP	OSC1	1.0	Full	7mA	15ns	45mA	$2.75	$2.45	$1.59	$1.39
27879CP	OSC1.84	1.8432	Full	7mA	15ns	45mA	2.39	1.95	1.45	1.05
27924CP	OSC2	2.0	Full	7mA	15ns	30mA	2.18	1.99	1.69	1.43
27967CP	OSC4	4.0	Full	7mA	10ns	50mA	1.99	1.79	1.59	1.39
27991CP	OSC8	8.0	Full	15mA	15ns	30mA	1.59	1.39	1.29	1.15
27887CP	OSC10	10.0	Full	15mA	10ns	20mA	1.59	1.39	1.29	1.15
102779CP	OSC10H	10.0	Half	45mA	6ns	30mA	1.19	1.07	.96	.86
144207CP	OSC11.05	11.059	Full	50mA	10ns	30mA	1.59	1.39	1.29	1.15
27895CP	OSC12	12.0	Full	15mA	10ns	50mA	1.59	1.29	.95	.67
108652CP	OSC14.31	14.31818	Full	15mA	10ns	50mA	1.59	1.39	1.29	1.15
27908CP	OSC16	16.0	Full	15mA	10ns	50mA	1.59	1.29	.95	.67
27932CP	OSC20	20.0	Full	17mA	10ns	20mA	1.79	1.59	1.45	1.29
27941CP	OSC32	32.0	Full	18mA	7ns	15mA	1.59	1.29	.95	.67
76822CP	OSC33	33.0	Full	18mA	6ns	15mA	1.99	1.79	1.60	1.45
153226CP	OSC40	40.0	Full	18mA	6ns	15mA	1.79	1.59	1.45	1.29
76831CP	OSC50	50.0	Full	25mA	6ns	25mA	1.99	1.59	1.49	1.35
76857CP	OSC100	100.0	Full	25mA	3ns	90mA	2.49	2.25	1.95	1.75

14-Pin Crystal Oscillator Socket

- Can be PCB mounted without the modifications that would be needed with DIP-IC sockets
- Low profile solder tail; machine tooled on 4 pins
- Good for prototyping and PCB mounting

Part No.	Description	1	10	100	1000
133006CP	Oscillator socket	$.55	$.46	$.34	$.31

Typical Crystal Oscillator Design

An oscillator is an amplifier with a feedback loop from output to input. Barkhausen criteria states that for oscillation to occur, the product of the gains around a loop must be equal to or greater than unity and that the sum of the phase shifts around the loop must be a multiple of 360°.

These parameters will determine the crystal specifications:
- On what crystal frequency do you wish to operate?
- How much can the frequency be off at room temperature (25°C)?
- At what temperature range will the crystal operate?
- How much can the crystal change frequency over the temperature range?
- Will the crystal operate at a series or parallel resonant?
- If operated at parallel, what is the parallel capacitance in picofarads (pF)?
- Is pullability important? • What holder type or can size do you require?

JAMECO

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Linear Series   SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
193471CP	OP07CD	8	Precision op amp.	$.79	$.69	$.59
193480CP	LM34DM	8	Prec. F temp. sensor (-55˚F to 300˚F)	1.49	1.35	.99
193498CP	LM35DM	8	Prec. C temp. sensor (-55˚C to 150˚C)	1.49	1.35	1.10
193501CP	TL072CD	8	Low noise JFET dual op amp.	.39	.29	.25
193519CP	TL074CD	8	Low noise JFET quad op amp.	.49	.39	.35
193527CP	TL082CD	8	JFET input dual op amp.	.37	.31	.29
193535CP	TL084CD	14	JFET input quad op amp.	.49	.45	.39
193543CP	LM311D	8	Voltage comparator	.29	.21	.19
86721CP	LM324D	14	Low power quad op amp.	.29	.21	.18
193560CP	LM335M	8	Precision temperature sensor	.99	.89	.79
193578CP	LM336M-2.5	8	Precision 2.5V shunt regulator diode	.69	.59	.49
193594CP	LM339M	14	Low pwr. low offset volt quad comparator	.29	.24	.19
193607CP	LF356M	8	JFET input op amp. (wide band)	.59	.54	.49
193615CP	LM358D	8	Low power dual op amp.	.29	.19	.16
193623CP	LM386M-1	8	Low volt. audio power amp. 250mW/12V	.29	.27	.25
193631CP	LM393D	8	Low power offset voltage dual comparator	.29	.24	.19
193640CP	LF412CD	8	Low offset drift JFET input dual op amp.	.99	.89	.69
86799CP	LM555CM	8	Timer (NE555D)	.29	.25	.22
193658CP	LM556CM	14	Dual 555 timer	.39	.35	.29
193666CP	LM567CM	8	Tone decoder	.69	.49	.39
193674CP	LM741CM	8	Op amp.	.29	.25	.22
193682CP	LM1458M	8	Dual op amp.	.29	.24	.18
193691CP	LM1488D	14	Quad line driver (RS-232)	.29	.25	.22
193703CP	LM1489D	14	Quad line receiver (RS-232)	.29	.25	.22
193826CP	ULN2003AD	16	Hi-volt/curr. darl. transistor array	.39	.35	.29
193738CP	NE5532D	16	Dual low noise op amp.	.45	.39	.35
193746CP	NE5534D	8	Low noise op amp.	.32	.29	.26

MSM82C53 & MAX232   SSOP & SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
180427CP	MSM82C53-5GS	32	CMOS prog. interval timer 2MHz (SSOP) ..	$2.19	$1.89	$1.69
106147CP	MAX232CWE	16	+5V pwred, dual RS-232 trans./rcvr. (SOIC)	1.95	1.75	1.59

4000 Series   SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
197261CP	CD4001M	14	Quad 2-input NOR gate	$.29	$.24	$.19
197270CP	CD4011M	14	Quad 2-input NAND gate	.29	.24	.19
197288CP	CD4013M	14	Dual D flip-flop with set/reset	.29	.24	.19
197296CP	CD4017M	16	Decade counter/divider	.49	.39	.29
197309CP	CD4020M	16	14-stage binary/ripple counter	.49	.39	.29
197317CP	CD4027M	16	Dual JK master-slave flip-flop	.39	.35	.29
197325CP	CD4029M	16	Presettable up/down counter	.49	.44	.39
197333CP	CD4040M	16	12-stage binary/ripple counter	.29	.25	.22
197341CP	CD4049M	16	Hex/buffer/converter (inverting)	.35	.29	.24
197350CP	CD4050M	16	Hex/buffer/converter (N-inverting)	.29	.25	.19
197368CP	CD4051M	16	Single 8-channel multi./demultiplexer	.39	.35	.29
197376CP	CD4066M	14	Quad bilateral switch	.29	.24	.19
197384CP	CD4069M	14	Hex inverter (74C04)	.29	.24	.19
197392CP	CD4071M	14	Quad 2-input OR gate	.29	.24	.19
197405CP	CD4081M	14	Quad 2-input AND gate	.29	.24	.19
197413CP	CD4093M	14	Quad 2-input NAND Schmitt trigger	.29	.24	.19
197421CP	CD4511M	16	BCD to 7-seg. latch/decoder/driver	.49	.45	.39
197430CP	CD4538M	16	Dual precision monostable multivibrator	.69	.48	.43
197448CP	CD4584M	14	Hex Schmitt trigger (74C14) 40106	.39	.35	.29

Voltage Regulators   SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
193551CP	LM317LM	8	100mA adj. pos. regulator (1.2V to 37V)	$.32	$.28	$.21
193586CP	LM337LM	8	1.5A adj. neg. regulator (-1.2V to -37V)	.79	.69	.59
214050CP	LM723CD	14	High precision voltage regulator	.34	.32	.30
193754CP	78L05ACM	8	5V 100mA pos. voltage regulator	.29	.25	.22
193762CP	78L06ACM	8	6.2V 100mA pos. voltage regulator	.29	.25	.22
193771CP	78L12ACM	8	12V 100mA pos. voltage regulator	.29	.25	.22
193789CP	78L15ACM	8	15V 100mA pos. voltage regulator	.25	.22	.19
193797CP	79L05ACM	8	-5V 100mA neg. voltage regulator	.35	.29	.25
193800CP	79L12ACM	8	-12V 100mA neg. voltage regulator	.35	.29	.25
193818CP	79L15ACM	8	-15V 100mA neg. voltage regulator	.29	.25	.22

74HC Series   SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
197106CP	74HC00M	14	Quad 2-input NAND gate	$.32	$.26	$.23
197114CP	74HC02M	14	Quad 2-input NOR gate	.17	.17	.17
197122CP	74HC04M	14	Hex inverter (buffered)	.29	.24	.19
197131CP	74HC08M	14	Quad 2-input AND gate	.32	.26	.23
197149CP	74HC14M	14	Hex inverter Schmitt trigger	.32	.26	.23
197157CP	74HC32M	14	Quad 2-input OR gate	.29	.26	.23
197165CP	74HC74M	14	Dual D flip-flop	.38	.29	.26
197173CP	74HC138M	14	3-to-8 decoder/demultiplexer	.35	.29	.25
197181CP	74HC164M	14	8-bit serial shift register	.39	.35	.29
197190CP	74HC165M	16	Parallel load 8-bit serial shift register	.35	.31	.26
197202CP	74HC244M	20	Octal driver tri-state	.49	.41	.31
197211CP	74HC245M	20	Octal transceiver tri-state	.49	.41	.31
197229CP	74HC373M	20	Octal D-type flip-flop tri-state	.49	.39	.29
197237CP	74HC374M	20	Octal D-type flip-flop edge-trig tri-state	.49	.39	.29
197245CP	74HC573M	20	Octal D-type flip-flop tri-state	.49	.39	.29
197253CP	74HC574M	20	Octal D-type flip-flop tri-state	.49	.39	.29

74LS Series   SOIC

Part No.	Cross Ref.	Pins	Description	1	10	100
198361CP	74LS00M	14	Quad 2-input NAND gate	$.29	$.24	$.19
198379CP	74LS02M	14	Quad 2-input NOR gate	.29	.24	.19
198387CP	74LS04M	14	Hex inverter	.29	.24	.19
198395CP	74LS05M	14	Hex inverter (O.C.)	.29	.24	.19
198408CP	74LS07M	14	Hex buffer/driver (O.C. hi-voltage)	.59	.49	.45
198416CP	74LS08M	14	Quad 2-input AND gate	.29	.24	.19
198424CP	74LS10M	14	Triple 3-input NAND gate	.29	.24	.19
198432CP	74LS11M	14	Triple 3-input AND gate	.29	.24	.19
198441CP	74LS14M	14	Hex inverter schmitt trigger	.29	.24	.19
198459CP	74LS20M	14	Dual 4-input NAND gate	.29	.24	.19
198467CP	74LS30M	14	8-input NAND gate	.29	.24	.19
198475CP	74LS32M	14	Quad 2-input OR gate	.29	.24	.19
198491CP	74LS74M	14	Dual D flip-flop	.29	.24	.19
198504CP	74LS75M	16	4-bit bi-stable latch	.39	.35	.29
198512CP	74LS85M	16	4-bit magnitude comparator	.39	.35	.29
198521CP	74LS86M	14	Quad EXCLUSIVE-OR gate	.39	.35	.29
198539CP	74LS90M	14	Decade counter	.49	.39	.29
198547CP	74LS93M	14	4-bit binary counter	.99	.89	.75
198555CP	74LS123M	16	Dual mono. multivibrator with clear	.49	.39	.29
198563CP	74LS138M	16	3 to 8 decoder/demultiplexer	.39	.35	.29
198571CP	74LS151M	16	8-input multiplexer	.39	.35	.29
198580CP	74LS157M	16	Quad 2/1 data selector	.39	.35	.29
198598CP	74LS193M	16	Binary up/down counter with clear	.49	.45	.39
198619CP	74LS240M	20	Octal invert. line driver tri-state	.49	.45	.39
198627CP	74LS244M	20	Octal driver tri-state	.39	.34	.29
198635CP	74LS245M	20	Octal bus transceiver tri-state	.39	.34	.29
198643CP	74LS273M	20	Octal D-type flip-flop with clear	.39	.34	.29
198651CP	74LS373M	20	Octal D flip-flop tri-state	.39	.34	.29
198660CP	74LS374M	20	Octal D F/F edge-trig tri-state	.39	.34	.29

Diode   DL-35

Prepackaged: order in increments of 100 or 1000

Part No.	Mfr. Cross Ref. No.	Description	100	1000
94908CP	1N4148SM	75 PRV @ 50µA, 10mA	$.03	$.025

Color Code Legend
New   Sale   Qty. Save   Closeout

Transistors

SOT-23

SOIC-16

✱ Prepackaged: order in increments of 10, 100 or 1000
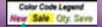
Part No.	Product No. ✦	Case	Desc.	Vceo	Min. h_{FE} @ Ic	Pricing 1	10	100	1000
214834CP	MMBTA05	SOT-23	NPN	60	—	✱	$.067	$.045	$.03
214842CP	MMBTA06	SOT-23	NPN	80	100 @ .01A	✱	.057	.048	.038
214851CP	MMBTA13	SOT-23	NPN	30	5k @ .01A	✱	.057	.039	.026
214869CP	MMBTA14	SOT-23	NPN	30	10k @ .01A	✱	.059	.039	.024
214885CP	MMBTA42	SOT-23	NPN	300	40 @ .01A	✱	.065	.057	.047
214906CP	MMBTA55	SOT-23	PNP	60	100 @ .01A	✱	.056	.038	.024
214914CP	MMBTA56	SOT-23	PNP	80	100 @ .01A	✱	.085	.058	.04
214922CP	MMBTA63	SOT-23	PNP	30	5k @ .01A	✱	.056	.038	.025
214931CP	MMBTA64	SOT-23	PNP	30	10k @ .01A	✱	.056	.038	.025
214957CP	MMBTA92	SOT-23	PNP	300	40 @ .01A	✱	.113	.074	.049
213920CP	MMBT918	SOT-23	NPN	15	20 @ .003A	✱	.043	.029	.018
94941CP	MMBT2222	SOT-23	NPN	30	100 @ .15A	.29	.24	.21	.18
213938CP	MMBT2222A	SOT-23	NPN	40	100 @ .15A	✱	.054	.045	.029
213997CP	MMPQ2222A	SOIC-16	NPN	40	100 @ .15A	.87	.81	.75	.57
214658CP	MMBT2369	SOT-23	PNP	25	60 @ .05A	✱	.04	.027	.017
213946CP	MMBT2369A	SOT-23	NPN	15	40 @ .01A	✱	.039	.027	.017
94959CP	MMBT2907	SOT-23	PNP	40	100 @ .15A	.29	.15	.12	.10
213954CP	MMBT2907A	SOT-23	PNP	60	100 @ .01A	✱	.038	.03	.02
214009CP	MMPQ2907A	SOIC-16	PNP	60	100 @ .01A	.99	.92	.81	.56
94967CP	MMBT3904	SOT-23	NPN	40	100 @ .01A	.29	.24	.21	.18
94975CP	MMBT3906	SOT-23	PNP	40	100 @ .01A	.29	.21	.14	.10
214017CP	MMPQ3906	SOIC-16	PNP	40	75 @ .01A	.89	.79	.71	.53
214674CP	MMBT4124	SOT-23	NPN	25	60 @ .05A	✱	.055	.037	.024
214682CP	MMBT4126	SOT-23	PNP	25	60 @ .05A	✱	.053	.037	.024
214703CP	MMBT4401	SOT-23	NPN	40	80 @ .01A	✱	.057	.038	.029
214720CP	MMBT4403	SOT-23	PNP	40	60 @ .001A	✱	.076	.049	.035
213962CP	MMBT5087	SOT-23	PNP	50	250 @ .01A	✱	.049	.036	.027
213971CP	MMBT5088	SOT-23	NPN	30	300 @ .01A	✱	.04	.027	.017
214746CP	MMBT5089	SOT-23	NPN	25	400 @ .01A	✱	.039	.027	.017
214754CP	MMBT5401	SOT-23	PNP	150	40 @ .001A	✱	.053	.039	.029
214762CP	MMBT5550	SOT-23	NPN	140	60 @ .01A	✱	.049	.034	.022
214771CP	MMBT5551	SOT-23	NPN	140	80 @ .01A	✱	.063	.045	.039
213989CP	MMBT6427	SOT-23	NPN	40	10k @ .01A	✱	.063	.057	.028
214789CP	MMBT6428	SOT-23	NPN	50	250 @ .01A	✱	.04	.027	.017
214025CP	MMPQ6700	SOIC-16	NPN/PNP	40	70 @ .01A	.73	.70	.65	.51

✦ Manufacturer varies

Vac Tweezers

Pick & place small parts of all kinds: glass slides, coins, optics, SMDs, film, etc.

• Size: 2.9"L x 0.6"W • One-year warranty

Includes: 5 pads sizes 0.14" to 0.4"; 5 straight tips and 2 pieces 45° angle tips

Part No.	Description	1	10
88268CP	Vacuum pick & place kit	$29.95	$26.95

4-Piece Conductive SMD Tweezer Set

• 4 types of tweezers: fine point, flat head for 4mm SMD chip device, flat head for 8mm SMD chip device, sharp angled tip • Each is 4.5" long

Part No.	Description	1	10	25
172638CP	4-piece conductive SMD tweezer set	$11.95	$10.95	$9.95

CHIPQUIK SMD 2000 Removal System

Complete Solder/Desolder Rework Kit

• Removal alloy, solder paste, 3' solder, paste flux, liquid flux remover, handi vac, 2 acid brushes, precision tweezers, six 4" x 4" cleaning wipes, 10 swabs, 6 alcohol pads, removal/clean up instructions, stainless steel probe kit & 5' solder

Part No.	Description	1	10
208055CP	SMD 2000 removal system	$109.95	$99.95

Surfboards®

SOT-23 3-MM 4-MM 0805, 1206 STRADDLE

Mini Breadboards for Surface Mount Devices

Ideal for Prototyping!

207407CP

6000/6100 Series for Discrete Devices

• Universal large foil pattern areas accept a wide range of device footprints or can be modified to accept new footprints • 0.1" pin spacing • Height: 0.5"

Part No.	Product No.	Pins	Width	1	10
207423CP	6103	3	0.3"	$1.25	$1.09
207407CP	6008	8	0.8"	2.15	1.89
207431CP	6109	9	0.9"	2.25	1.99
207415CP	6010	10	1.0"	2.65	2.29

9000 Series for ICs

• Adapt SMD to thru-hole
• Size: 1.20"W x 0.65"H

207378CP/207394CP: 0.1" pin spacing

207360CP   **207394CP**

Part No.	Product No.	1	10
207360CP	9081 (For 8-pin SOIC)	$1.35	$1.15
207378CP	9082 (For 8-pin SOIC)	3.55	3.10
207386CP	9161 (For 14/16-pin SOIC)	1.75	1.50
207394CP	9163 (For 14/16-pin SOIC)	5.45	4.79

Application Specific Adapters

33000 series SURFBOARDS® convert SMD component footprints to SIP format. Compatible with conventional and solderless breadboards & sockets (.100" center pins).

207589CP

Part No.	Product No.	Accepted Devices	Pins	1	10
207589CP	33205	SOT-23-5/SC59-5	5	$1.55	$1.39
207597CP	33206	SOT-23-6/SOT-23-L/SC-59-6/TSOP-6	6	1.75	1.54

Surface Mount Proto Boards

Designing and prototyping circuit boards incorporating surface components up to now has been a very tedious and time-consuming process because SMT are so small and hard to handle. Also engineers, students, or hobbyists have to deal with different pin pattern types that are equivalent but unfamiliar. Now there is an easy, cost-effective, and versatile solution from: **BELLIN DYNAMIC SYSTEMS, INC.**

• Easy identification for pattern type
• Provide better access to SMT product lines
• Quality silk-screened and solder-masked boards
• V-groove scoring between elements for smooth straight edges
• Compatible with .100" single or dual row male headers (see page 123)
• Size: 7.6"L x 5.0"W • Board thickness: 0.031"
• See our website (www.jameco.com) for additional specifications

Part No.	Prod. No.	Description	1	10
215491CP	B502	160 SMT pattern, SOT/SOIC/TSOP/MSOP/DPAK & more	$45.95	$41.35
215503CP	B503	34 SMT pattern, SOIC/QSOP/TSOP/MSOP/TSSOP & more	45.95	41.35
215511CP	B504	25 SMT pattern, QFP32, 44, 48, 52, 54, 64, 70, 80, 100 PLCC18, 20, 28, 32, 44	45.95	41.35
215520CP	B505	60 SOIC SMT pattern, SOIC 8, 14, 16, 24, 32, 40 & more	45.95	41.95

PLCC Surface Mount and DIP IC Extractors

• Size: 4.0"L x 2.0"W (both)

16766CP   **16838CP**

Part No.	Product No.	Description	1	10	100
16766CP	HT103B	PLCC IC extractor	$3.95	$3.55	$3.19
16838CP	HT103A	DIP IC extractor	1.49	1.25	1.09

CHIPQUIK SMD Removal Kit

• Quick and easy to use
• Potential damage to printed circuit boards is eliminated
• 2.5' of CHIPQUIK® material removes 1250-1500 SMD pins
• Uses simple equipment and materials for application & clean-up

Part No.	Description	1	10
141305CP	SMD removal kit	$21.95	$19.75

193009CP Tape and Reel   **193009CP**
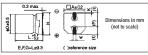
Aluminum Electrolytic Capacitors

Operating temperature range		-40°C to +85°C
Leakage Current (20°C)	after 2 minutes	1≤ .01CV or 3µA

✱Prepackaged: order in increments of 10, 100 or 1000

Dimensions in mm (not to scale)

✱Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref No.†	Value (µF)	Voltage	Dia. (mm)	1	10	100	500
193228CP	SE1/50	1	50	4.0	✱	$.25	$.19	$.16
193236CP	SE2.2/50	2.2	50	4.0	.39	.35	.29	.25
193244CP	SE3.3/50	3.3	50	4.0	✱	.22	.17	.14
193076CP	SE427/25	4.7	25	4.0	✱	.29	.24	.16
193252CP	SE4.7/50	4.7	50	5.0	✱	.16	.14	.12
192997CP	SE10/16	10	16	4.0	✱	.29	.26	.22
193084CP	SE10/25	10	25	5.0	✱	.29	.24	.16
193164CP	SE10/35	10	35	5.0	✱	.26	.22	.19
193261CP	SE10/50	10	50	6.3	✱	.19	.16	.14
192891CP	SE22/6.3	22	6.3	4.0	✱	.29	.24	.16
193009CP	SE22/16	22	16	5.0	✱	.29	.24	.16
193092CP	SE22/25	22	25	6.3	✱	.39	.29	.25
193172CP	SE22/35	22	35	6.3	✱	.19	.16	.14
193279CP	SE22/50	22	50	6.3	✱	.26	.22	.19
193017CP	SE33/16	33	16	5.0	✱	.29	.25	.20
193105CP	SE33/25	33	25	6.3	✱	.22	.19	.17
193181CP	SE33/35	33	35	8.0	✱	.29	.24	.21
193287CP	SE33/50	33	50	8.0	✱	.30	.25	.22
193025CP	SE47/16	47	16	6.3	✱	.33	.28	.23
193113CP	SE47/25	47	25	6.3	.39	.35	.29	.25
193199CP	SE47/35	47	35	6.3	✱	.29	.25	.19

Part No.	Mfr. Cross Ref. No.†	Value (µF)	Voltage	Dia. (mm)	1	10	100	500
193295CP	SE47/50	47	50	10.0	✱	$.45	$.39	$.35
192903CP	SE100/6.3	100	6.3	6.3	✱	.39	.29	.25
192954CP	SE100/10	100	10	6.3	✱	.19	.16	.14
193033CP	SE100/16	100	16	8.0	✱	.45	.39	.32
193121CP	SE100/25	100	25	8.0	✱	.35	.28	.24
193201CP	SE100/35	100	35	10.0	.39	.35	.31	.26
193308CP	SE100/50	100	50	10.0	✱	.52	.45	.39
192911CP	SE220/6.3	220	6.3	6.3	✱	.29	.26	.23
192962CP	SE220/10	220	10	8.0	✱	.37	.29	.25
193041CP	SE220/16	220	16	8.0	✱	.39	.35	.29
193130CP	SE220/25	220	25	10.0	✱	.59	.49	.43
193210CP	SE220/35	220	35	8.0	.55	.45	.39	.35
193316CP	SE220/50	220	50	10.0	✱	.59	.49	.39
193050CP	SE330/16	330	16	10.0	.59	.49	.44	.39
193148CP	SE330/25	330	25	8.0	✱	.55	.45	.39
192920CP	SE470/6.3	470	6.3	8.0	.69	.59	.49	.45
192971CP	SE470/10	470	10	8.0	✱	.39	.35	.32
193068CP	SE470/16	470	16	10.0	✱	.55	.45	.39
193156CP	SE470/25	470	25	10.0	✱	.55	.49	.47
192938CP	SE1000/6.3	1000	6.3	10.0	.55	.45	.39	.35
192989CP	SE1000/10	1000	10	10.0	✱	.75	.69	.65
192946CP	SE1500/6.3	1500	6.3	10.0	.69	.55	.49	.44

† **Cross Reference: Panasonic:** VS Series

Ne® Multilayer Ceramic Chip Capacitors

Any surface mount Ceramic Chip Capacitor may be special ordered – 3000 piece minimum.

0805 SMT CASE   **1206 SMT CASE**

X7R SERIES (±10%)

0805 SMT Case			Pricing per each				
Part No.	Capacitance	Volt.	100 pc. Incremnt	500	1000	3000	5000
87311CP	.01µF	50	$.12	$.09	$.07	$.065	$.06
87370CP	.1µF	25	.14	.11	.08	.06	.05

1206 SMT Case			Pricing per each				
Part No.	Capacitance	Volt.	100 pc. Incremnt	500	1000	3000	5000
87329CP	.01µF	50	$.15	$.12	$.09	$.07	$.06
87388CP	.1µF	50	.19	.17	.15	.11	.10
87396CP	.22µF	25	.25	.22	.19	.15	.14

Z5U SERIES (±20%)

0805 SMT Case			Pricing per each			
Part No.	Capacitance	Voltage	100 pc. Incremnt	500	1000	5000
87177CP	.1µF	50	$.037	$.033	$.028	$.026

1206 SMT Case			Pricing per each			
Part No.	Capacitance	Voltage	100 pc. Incremnt	500	1000	5000
87185CP	.1µF	50	$.08	$.06	$.05	$.04
87206CP	.22µF	50	.09	.06	.05	.04
87222CP	.47µF	50	.25	.22	.19	.17

See page 115 for Plastic Fliptop Case for SMDs.

Ne® Resin Molded Chip Tantalum Electrolytic Capacitors (± 20%)

Any surface mount Tantalum Chip Capacitor may be special ordered – 2000 piece minimum.

Case Size (Dimensions in mm)

EIA CASE CODE	L ±0.2	W ±0.2	H ±0.2	P ±0.3	a ±0.2	h(min)
A (3216)	3.2	1.6	1.7	0.8	1.2	0.7
B (3528)	3.5	2.8	1.9	0.8	2.0	0.7
C (6032)	6.0	3.2	2.5	1.3	2.0	1.0
D (7343)	7.3	4.3	2.9	1.3	2.4	1.0

10V SMT Tantalum				Pricing per each			
Part No.	Capacitance	Case Size	10 pc. Incremnt	100	500	1000	5000
87020CP	10µF	B	$.55	$.50	$.40	$.32	$.29
87118CP	100µF	D	1.49	1.19	.89	.82	.75

16V SMT Tantalum				Pricing per each			
Part No.	Capacitance	Case Size	10 pc. Incremnt	100	500	1000	5000
86932CP	1µF	A	$.39	$.33	$.26	$.22	$.21
87038CP	10µF	C	.63	.57	.45	.34	.24
87100CP	47µF	D	1.09	.89	.79	.74	.69

PLCC Surface Mount Sockets

- Current: 1A
- Dielectric strength: 600VAC for 1 minute
- Insulator resistance: 5000MΩ minimum
- Temperature surface mount: -55°C/ +170°C

SALE

152688CP   Dimensions in mm

Part #	A & B	C & D	E
152688	23.18	12.70	28.50
152696	30.80	20.32	40.00

Part No.	Mfr. Cross Ref. No.	Pins	1	10	50	100
152688CP	PLCC44D	44	$.99	$.79	$.49	$.39
152696CP	PLCC68D	68	.525	.49	.45	.39

0805 Resistor Assortment (±5%)

144 Values, 50 pcs. each; 7,200 Pieces Total

Resistance Value Chart:

1.2	10	75	430	2.0k	10k	51k	270k	2.2M
1.6	16	85	470	2.2k	11k	56k	300k	2.4M
2.2	18	91	510	2.4k	12k	62k	360k	2.7M
2.4	20	110	560	2.7k	13k	68k	390k	3.0M
2.7	22	120	620	3.0k	15k	75k	430k	3.3M
3.0	24	130	680	3.3k	16k	82k	470k	3.6M
3.3	27	150	750	3.6k	18k	91k	510k	3.9M
4.3	30	160	820	3.9k	20k	100k	560k	4.3M
4.7	33	180	910	4.3k	22k	110k	620k	4.7M
5.1	39	200	1.0k	4.7k	24k	120k	750k	5.1M
5.6	43	220	1.1k	5.6k	27k	150k	820k	5.6M
6.2	47	240	1.2k	6.2k	30k	160k	910k	6.8M
6.8	51	270	1.3k	6.8k	33k	180k	1.0M	7.5M
7.5	56	300	1.5k	7.5k	36k	200k	1.6M	8.2M
8.2	62	360	1.6k	8.2k	39k	220k	1.8M	9.1M
9.1	68	390	1.8k	9.1k	43k	240k	2.0M	10M

- Size (mm): 2.0L x 1.25W x 0.5Thick
- Max. overload voltage: 200V
- 1/8 watts
- Operating temperature: -50°C to 120°C
- Case size (two cases): 10.5"L x 6.7"W x 1.7"T
- Weight: 1.9 lbs.

Includes: Case with labels

Part No.	Mfr. Cross Ref. No.	1	10	25
172806CP	16-500	$79.95	$71.95	$64.79

1206 Resistor Assortment (±1%)

56 Values, 200 pcs. each; 11,200 pcs. Total

Value Chart (Ohms)

10	200	3.92k	75k
12.1	243	4.99k	90.9k
15	301	6.19k	100k
20	392	7.5k	121k
24.3	499	9.09k	150k
30.1	619	10k	200k
39.2	750	12.1k	243k
49.9	909	15k	301k
61.9	1k	20k	392k
75	1.21k	24.3k	499k
90.9	1.5k	30.1k	619k
100	2k	39.2k	750k
121	2.43k	49.9k	909k
150	3.01k	61.9k	1M

Packaged in strips of 200 pcs. each

- Max. working voltage: 200V
- Power: 1/8W
- Operating temperature: -55°C to +125°C
- Temp. coefficient: ±100 ppm/°C
- Resistor dimensions (mm): 3.10L x 1.5 W x 0.55H

Part No.	Mfr. Cross Ref. No.	1	10	25
156881CP	SMR1206SB	$99.99	$89.99	$79.99

Color Code Legend
New Sale Qty Save Closeout

See page 81 for Surface Mount Capacitors.
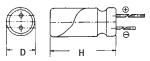
Aluminum Radial-Lead Electrolytic Capacitors
General purpose low voltage 85°C (A); HT Type 105°C (B) ±20%

Operating temperature range		-40°C to +85°C (A); -40°C to +105°C (B)
Leakage Current (20°C)	After 1 min.	0.03CV or 4μA, whichever is greater
	After 2 min.	0.01CV or 3μA, whichever is greater

D   H

† **CROSS REFERENCES: Elna:** RC2/RE2; **IC:** RAR/RSS; **Marcon:** SEM/SSM; **Nichicon:** LB/VX/USA/SR/SA; **Rubycon:** MS7/TWSS; **Sprague:** 501D/513D; **UCC:** SME/SRE/SRA/SRG; **Panasonic:** KA/KS/SU

✻Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Op. Temp	Value (μF)	Voltage	Size (mm)* D x H	1	10	100	500
158481CP	R0.47B100	B	0.47	100V	5 x 11.5	✻	$.05	$.04	$.03
94160CP	5R1/50	A	1	50V	4 x 5	✻	.12	.08	.05
29831CP	R1/50	A	1	50V	5 x 11	✻	.09	.07	.05
158490CP	R1B100	B	1	100V	5 x 11.5	✻	.06	.05	.04
93729CP	R2.2/50	A	2.2	50V	5 x 11	✻	.10	.08	.045
199021CP	R2.2J/100	A	2.2	100V	5 x 11	✻	.035	.03	.025
135183CP	R3.3/50	A	3.3	50V	5 x 11	✻	.07	.05	.035
199030CP	R3.3J/100	A	3.3	100V	5 x 11	✻	.035	.03	.025
31000CP	R4.7/50	A	4.7	50V	5 x 11	✻	.09	.06	.045
198838CP	R10J/16	A	10	16V	5 x 11	✻	.045	.03	.025
94211CP	5R10/25	A	10	25V	4 x 5	✻	.13	.08	.05
94220CP	5R10/35	A	10	35V	5 x 5	✻	.15	.12	.06
94369CP	7R10/35	A	10	35V	5 x 7	✻	.12	.08	.05
29891CP	R10/50	A	10	50V	5 x 10	✻	.06	.05	.04
199048CP	R10J/100	A	10	100V	6.3 x 11	✻	.08	.06	.05
158529CP	R10B100	B	10	100V	6 x 11.5	✻	.08	.06	.05
158326CP	R22B35	B	22	35V	5 x 11.5	✻	.09	.07	.05
198846CP	R22J/16	A	22	16V	5 x 11	✻	.045	.04	.03
189918CP	R22J/25	A	22	25V	5 x 11	✻	.045	.04	.03
207870CP	R22B/25	B	22	25V	5 x 11	✻	.06	.05	.035
198942CP	R22J/35	A	22	35V	5 x 11	✻	.035	.03	.025
93737CP	R22/50	A	22	50V	6 x 11	✻	.06	.05	.035
199056CP	R22J/100	A	22	100V	6.3 x 11	.30	.21	.14	.09
198854CP	R33J/16	A	33	16V	5 x 11	✻	.045	.035	.025
198926CP	R33J/25	A	33	25V	5 x 11	✻	.045	.035	.025
93745CP	R33/50	A	33	50V	6 x 11	✻	.055	.05	.045
199064CP	R33J/100	A	33	100V	8 x 11.5	✻	.11	.10	.09
135301CP	R47/10	A	47	10V	5 x 12	✻	.06	.05	.045
198862CP	R47J/16	A	47	16V	5 x 11	✻	.045	.035	.025
93753CP	R47/25[1]	A	47	25V	10 x 17	✻	.06	.05	.04
198951CP	R47J/35	A	47	35V	5 x 10	✻	.05	.04	.03
199072CP	R47J/100	A	47	100V	10 x 12.5	.35	.26	.18	.13
158246CP	R47B25	B	47	25V	5 x 11.5	✻	.09	.07	.05
31114CP	R47/50	A	47	50V	6 x 11	✻	.06	.05	.045
207811CP	R100/10	A	100	10V	5 x 11	✻	.08	.06	.05
94289CP	5R100/16	A	100	16V	6 x 5	✻	.15	.12	.09
94431CP	7R100/16	A	100	16V	6 x 7	✻	.15	.11	.08
93761CP	R100/25	A	100	25V	6 x 11	✻	.09	.07	.05
198969CP	R100J/35	A	100	35V	6.3 x 11	✻	.07	.06	.05
29962CP	R100/50	A	100	50V	8 x 11	✻	.07	.06	.05
158393CP	R100B50	B	100	50V	8 x 12	✻	.11	.09	.07

✻Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Op. Temp	Value (μF)	Voltage	Size (mm)* D x H	1	10	100	500
207845CP	R180/16	B	180	16V	6.5 x 15	✻	$.07	$.06	$.045
135124CP	7R220/10	A	220	10V	8 x 11	.28	.21	.15	.11
198871CP	R220J/16	A	220	16V	6.3 x 11	.25	.16	.11	.07
30496CP	R220/25	A	220	25V	8 x 11	✻	.08	.06	.05
158262CP	R220B25	B	220	25V	8 x 12	✻	.12	.09	.07
93770CP	R220/35	A	220	35V	10 x 16	✻	.12	.09	.08
93778CP	R220/50	A	220	50V	10 x 20	✻	.15	.12	.09
158406CP	R220B50	B	220	50V	10 x 17	✻	.17	.14	.11
199081CP	R220J/100	A	220	100V	12.5 x 25	1.10	.85	.63	.39
198889CP	R330J/16	A	330	16V	8 x 11.5	.29	.19	.13	.09
93796CP	R330/25	A	330	25V	10 x 19	✻	.20	.15	.11
198977CP	R330J/35	A	330	35V	10 x 12.5	.45	.35	.25	.18
199099CP	R330J/100	A	330	100V	12.5 x 25	1.45	1.10	.79	.59
93809CP	R470/16	A	470	16V	10 x 20	✻	.13	.11	.10
158203CP	R470B16	B	470	16V	8 x 12	✻	.12	.10	.09
31181CP	R470/25	A	470	25V	10 x 16	✻	.12	.10	.09
158289CP	R470B25	B	470	25V	8 x 14	✻	.15	.12	.10
93817CP	R470/35	A	470	35V	12 x 24	✻	.17	.15	.13
93825CP	R470/50	A	470	50V	13 x 20	.29	.27	.19	.13
158465CP	R470B63	B	470	63V	13 x 21	.30	.27	.24	.21
199101CP	R470J/100	A	470	100V	16 x 25	1.89	1.45	1.10	.80
30015CP	R1000/16	A	1000	16V	13 x 21	✻	.15	.13	.10
93833CP	R1000/25	A	1000	25V	12 x 20	✻	.25	.23	.18
158297CP	R1000B25	B	1000	25V	10 x 17	.35	.29	.25	.19
158377CP	R1000B35	B	1000	35V	13 x 21	.39	.35	.31	.27
93841CP	R1000/50	A	1000	50V	16 x 26	.52	.46	.41	.34
199110CP	R1000J/100	A	1000	100V	18 x 40	3.59	2.69	1.99	1.55
133145CP	R2200/16	A	2200	16V	16 x 26	.32	.28	.24	.22
30533CP	R2200/25	A	2200	25V	16 x 36	.45	.39	.35	.30
198985CP	R2200J/35	A	2200	35V	16 x 25	1.39	1.25	.99	.74
158431CP	R2200B50	B	2200	50V	16 x 31	.99	.89	.70	.61
198897CP	R3300J/16	A	3300	16V	12.5 x 25	1.25	.99	.73	.49
30891CP	R3300/25	A	3300	25V	16 x 31	.69	.60	.54	.48
198993CP	R3300J/35	A	3300	35V	16 x 35.5	1.95	1.49	1.15	.83
199013CP	R3300J/50	A	3300	50V	18 x 35.5	3.10	2.35	1.75	1.32
198900CP	R4700J/16	A	4700	16V	16 x 25	1.35	.99	.75	.55
93850CP	R4700/25	A	4700	25V	18 x 35	.79	.69	.62	.55
199005CP	R4700J/35	A	4700	35V	18 x 35.5	2.95	2.19	1.69	1.25
163301CP	R4700/50	A	4700	50V	22 x 42	1.99	1.79	1.50	1.31
31510CP	R6800/16	A	6800	16V	18 x 36	1.12	1.01	.88	.79
198934CP	R6800J/25	A	6800	25V	18 x 35.5	2.79	2.15	1.59	1.19

*Capacitor dimensions and styles may vary   [1] Non-polarized
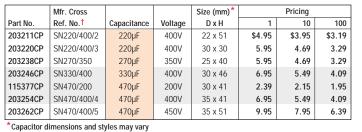
Snap Mount Large Can Aluminum Electrolytic Capacitors (±20%)

- Designed as input filter for switched mode power supply; standard 10mm (.400") snap-in spacing
- Operating temperature range: -40°C to +85°C max. leakage current: 0.02CV (uA) or 3mA whichever is smaller
- Can-Top safety vent

Snap-Ins!

† **CROSS REFERENCES: Aero M:** LP/LPR; **Elna:** LP3/LP4; **Illinois Capacitor:** LBA/LPR; **Mallory:** LPX; **Marcon:** CEAWF; **Nichicon:** LLK/LLQ; **Panasonic:** TS-UP/TS-U; **Phillips** (MEPCO): 3487/3489; **Rubycon:** RSP; **Sprague:** 80D/82D; **United Chemicon:** SMG(VN)/SMH(VN)

115422CP

Part No.	Mfr. Cross Ref. No.†	Capacitance	Voltage	Size (mm)* D x H	1	10	100
203211CP	SN220/400/2	220μF	400V	22 x 51	$4.95	$3.95	$3.19
203220CP	SN220/400/3	220μF	400V	30 x 30	5.95	4.69	3.29
203238CP	SN270/350	270μF	350V	25 x 40	5.95	4.69	3.29
203246CP	SN330/400	330μF	400V	30 x 46	6.95	5.49	4.09
115377CP	SN470/200	470μF	200V	30 x 41	2.39	2.15	1.95
203254CP	SN470/400/4	470μF	400V	35 x 41	6.95	5.49	4.09
203262CP	SN470/400/5	470μF	450V	35 x 51	9.95	7.95	6.39

Part No.	Mfr. Cross Ref. No.†	Capacitance	Voltage	Size (mm)* D x H	1	10	100
155889CP	SN560/200	560μF	200V	23 x 41	$2.99	$2.69	$2.45
203271CP	SN680/200/2	680μF	200V	35 x 25	4.49	3.49	2.75
203289CP	SN680/200/3	680μF	200V	30 x 31	4.95	3.95	3.19
203297CP	SN820/200/4	820μF	200V	30 x 41	4.49	3.49	2.75
203300CP	SN820/200/2	820μF	200V	35 x 25	4.95	3.95	3.19
115422CP	SN4700/50	4,700μF	50V	30 x 41	2.89	2.59	2.35
115431CP	SN6800/50	6,800μF	50V	30 x 51	3.45	3.15	2.85
157737CP	SN10000/50	10,000μF	50V	35 x 40	4.95	4.10	3.99

*Capacitor dimensions and styles may vary
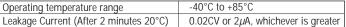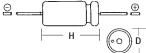
Aluminum Axial-Lead Electrolytic Capacitors
General purpose low voltage 85°C maximum

Operating temperature range	-40°C to +85°C
Leakage Current (After 2 minutes 20°C)	0.02CV or 2μA, whichever is greater

†**CROSS REFERENCES: Elna:** RE2; **IC:** RAR; **Marcon:** SEM; **Nichicon:** LB/VX; **Rubycon:** TWSS; **Sprague:** 501D/513D; **UCC:** SME; **Panasonic:** SU

✻Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Value (μF)	Voltage	Size (mm)✻ DxH	Pricing 1	10	100	500
10866CP	A1/50	1	50V	5 x 13	✻	$.15	$.115	$.09
199128CP	A2.2J/16	2.2	16V	6 x 13	✻	.17	.13	.09
93569CP	A2.2/50	2.2	50V	6 x 13	✻	.19	.14	.10
199136CP	A3.3J/16	3.3	16V	6 x 12	.072	.066	.06	.06
199419CP	A3.3J/50	3.3	50V	6 x 12	✻	.23	.12	.09
11076CP	A4.7/50	4.7	50V	6 x 13	✻	.18	.13	.11
199427CP	A6.8J/50	6.8	50V	6 x 12	✻	.23	.12	.09
199144CP	A10J/16	10	16V	6 x 12	✻	.20	.14	.10
199259CP	A10J/25	10	25V	5 x 12	✻	.20	.14	.10
93577CP	A10/35	10	35V	6 x 13	✻	.19	.14	.10
10882CP	A10/50	10	50V	6 x 12	✻	.15	.12	.09
199152CP	A22J/16	22	16V	6 x 12	✻	.17	.12	.09
199267CP	A22J/25	22	25V	6 x 12	✻	.20	.14	.10
10997CP	A22/50	22	50V	6 x 12	✻	.19	.14	.10
199161CP	A33J/16	33	16V	6 x 13	✻	.20	.14	.10
199275CP	A33J/25	33	25V	6.3 x 12	✻	.23	.12	.09
199347CP	A33J/35	33	35V	6.3 x 16	✻	.20	.14	.10
199435CP	A33J/50	33	50V	6.3 x 16	✻	.23	.12	.09
199179CP	A47J/16	47	16V	6.3 x 12	✻	.20	.14	.10
135319CP	A47/25	47	25V	8 x 16	✻	.23	.18	.14
199355CP	A47J/35	47	35V	6.3 x 16	✻	.20	.14	.10
11105CP	A47/50	47	50V	8 x 16	✻	.19	.14	.10
199443CP	A68J/50	68	50V	8 x 15	.25	.21	.17	.12
199187CP	A100J/16	100	16V	6.3 x 16	.28	.24	.20	.15
199283CP	A100J/25	100	25V	8 x 16	.29	.25	.21	.15
93551CP	A100/35	100	35V	8 x 16	✻	.24	.19	.14
10911CP	A100/50	100	50V	8 x 20	✻	.25	.19	.15
199195CP	A220J16	220	16V	8 x 16	.28	.24	.20	.15
199291CP	A220J/25	220	25V	8 x 16	.29	.25	.21	.15
199363CP	A220J/35	220	35V	10 x 17	.35	.28	.25	.19

Part No.	Mfr. Cross Ref. No.†	Value (μF)	Voltage	Size (mm)✻ DxH	Pricing 1	10	100	500
11017CP	A220/50	220	50V	10 x 20	$.29	$.25	$.22	$.18
199208CP	A330J/16	330	16V	8 x 16	.10	.095	.086	.086
199304CP	A330J/25	330	25V	10 x 17	.35	.28	.25	.19
199371CP	A330J/35	330	35V	10 x 17	✻	.23	.19	.17
199451CP	A330J/50	330	50V	13 x 22	.51	.39	.27	.27
199216CP	A470J/16	470	16V	8 x 16	.35	.28	.25	.19
199312CP	A470J/25	470	25V	10 x 17	.45	.37	.33	.28
199380CP	A470J/35	470	35V	10 x 21	.51	.41	.35	.31
11121CP	A470/50	470	50V	13 x 31	.59	.49	.45	.39
199460CP	A680J/50	680	50V	16 x 25	.81	.69	.54	.44
93631CP	A1000/16	1000	16V	13 x 27	.61	.49	.42	.39
10954CP	A1000/25	1000	25V	13 x 31	.59	.49	.44	.34
93649CP	A1000/35	1000	35V	13 x 26	.79	.71	.65	.57
147256CP	A1000/50	1000	50V	16 x 31	.69	.59	.55	.49
213356CP	A1000/50-1	1000	50V	22 x 41	.69	.59	.55	.49
11033CP	A2200/16	2200	16V	16 x 40	.79	.71	.65	.59
199321CP	A2200J/25	2200	25V	16 x 28	1.11	.90	.78	.59
93657CP	A2200/35	2200	35V	16 x 30	1.25	1.10	.99	.85
199478CP	A2200J/50	2200	50V	18 x 42	2.55	2.10	1.95	1.75
199224CP	A3300J/16	3300	16V	16 x 26	.79	.71	.65	.58
93665CP	A3300/25	3300	25V	16 x 32	.89	.79	.69	.59
199398CP	A3300J/35	3300	35V	18 x 37	3.39	2.95	2.29	2.10
199486CP	A3300J/50	3300	50V	22 x 43	4.29	3.29	3.15	2.95
199232CP	A4700J/16	4700	16V	16 x 30	2.10	1.69	1.25	.89
93673CP	A4700/25	4700	25V	22 x 39	1.59	1.45	1.15	.99
199401CP	A4700J/35	4700	35V	18 x 40	4.85	3.99	3.35	2.99
158810CP	A4700A50	4700	50V	25 x 43	2.95	2.49	2.25	1.95
199241CP	A6800J/16	6800	16V	16 x 33	2.15	1.85	1.39	1.15
199339CP	A6800J/25	6800	25V	18 x 40	1.59	1.45	1.35	1.19
93681CP	A10000/16	10000	16V	22 x 51	2.25	1.80	1.35	.95

*Capacitor dimensions and styles may vary

Ceramic Disc Capacitors (±20%)
25, 50 and 1000 Volt, Z5U Temperature Coefficient

Operating temperature range	+10°C to +85°C
Cap. change over temp. range	+22% to -56%
Dielectric withstanding voltage	2.5 times rated volt. for not < 1 sec.

Any Ceramic Disc Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

Low Voltage 50VDC Ceramic

Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Capacitance	Voltage	Dia.* (mm)	Pricing 10	100	1000	5000
135141CP	DC2.2	2.2pF	50V	5	$.05	$.035	$.02	$.015
15333CP	DC10	10pF	50V	5	.07	.05	.02	.015
15405CP	DC22	22pF	50V	6	.07	.05	.025	.02
15510CP	DC47	47pF	50V	5	.05	.035	.02	.015
15341CP	DC100	100pF	50V	5	.05	.035	.025	.02
15413CP	DC220	220pF	50V	5	.05	.035	.025	.015
15528CP	DC470	470pF	50V	5	.08	.065	.025	.022
207853CP	DC820/1000	820pF	1000V	14	.06	.04	.03	.02
15190CP	DC.001	.001μF	50V	6	.06	.05	.025	.022
97341CP	DC.0022/1K20	.0022μF	1000V	11	.15	.10	.07	.055
15211CP	DC.0047	.0047μF	50V	6	.05	.035	.03	.02
15229CP	DC.01	.01μF	50V	6	.06	.04	.03	.02
97375CP	DC.01/1K20	.01μF	1000V	12	.15	.10	.07	.055
15245CP	DC.022	.022μF	50V	8	.07	.05	.04	.03
15253CP	DC.047	.047μF	50V	8	.07	.06	.05	.04
151116CP	DC.1/25	.1μF	25V	6	.14	.13	.08	.07
15270CP	DC.1	.1μF	50V	8	.15	.13	.115	.095

*Capacitor dimensions and styles may vary

Monolithic Ceramic Capacitors (±20%) (Z5U Series)
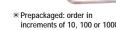
Applications:
• Data processing
• Communications engineering

Operating temperature range: -10°C to +85°C

Any Ceramic Disc Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

✻Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Capacitance	Volt.	Size (mm)* W x T x H	Pricing 1	10	100	1000	5000
81541CP	MD10	10pF	50V	3.5 x 2.0 x 3.0	✻	$.10	$.07	$.045	$.05
81533CP	MD22	22pF	50V	4.0 x 2.0 x 4.0	✻	.095	.073	.045	.04
81525CP	MD100	100pF	50V	3.5 x 2.0 x 3.0	✻	.09	.07	.045	.035
81517CP	MD.001	.001μF	50V	4.5 x 2.0 x 3.0	✻	.09	.07	.05	.035
138181CP	MD.0022	.0022μF	50V	4.0 x 2.0 x 5.5	✻	.07	.06	.05	.04
138202CP	MD.0047	.0047μF	50V	5.0 x 2.0 x 5.5	✻	.09	.07	.05	.035
25507CP	MD.01	.01μF	50V	3.5 x 2.0 x 3.0	✻	.09	.06	.04	.035
57621CP	MD.047	.047μF	50V	2.5 x 2.5 x 3.0	✻	.10	.07	.05	.045
25523CP	MD.1	.1μF	50V	6.0 x 2.0 x 4.0	✻	.07	.06	.04	.035
25540CP	MD.22	.22μF	50V	6.0 x 2.0 x 4.5	✻	.17	.12	.08	.06
138237CP	MD.33	.33μF	50V	6.0 x 2.0 x 8.0	✻	.20	.17	.11	.07
25558CP	MD.47	.47μF	50V	4.5 x 2.5 x 4.5	✻	.25	.19	.13	.12
81509CP	MD1	1μF	50V	6.0 x 3.0 x 7.0	.58	.52	.46	.41	.37

*Capacitor dimensions and style may vary

Color Code Legend
New | Sale | Qty. Save | Closeout

See page 81 for Surface Mount Capacitors.

Mylar Capacitors (±10%)
Metallized Polyester Film Capacitors

• High performance at low cost • Non-inductive construction

Operating temperature range	-40°C to +85°C
Dissipation factor	≤.01 (at 1kHz)
Dielectric strength	150% of rated voltage for 5 sec.

†**Cross References:**

Panasonic: ECQ-E Series; **Sprague:** DF/450P/451P/453P; **Westlake:** 160/168/185/167/184/186; **Rubycon:** MC/MN; **Mepco:** 713A1/719A1/C280; **TRW:** X601PE/X601CPE; **Packtron:** MF/RB; **Secor:** MMKS/MMKR/MMDR; **RIFA:** PHE353/ PHE354; **Roederstein:** MKT 1818/MKT 1822; **WIMA:** MKS; **CSF Thompson:** MD/ MC; **Siemens:** B325X-XX; **NIC:** NEM/NRM; **Nichicon:** DDXM; **Phillips:** 712 A1 series

Any Mylar Capacitors can be special ordered on ammo-style tape – 1000 piece minimum

✳Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.†	Capacitance	Volt. (V)	Size (mm)* L x T x H	Pricing 1	10	100	1000
26833CP	MY.001	.001µF	100	7.0 x 3.0 x 5.0	✳	$.10	$.07	$.05
207802CP	MY.0015/1000	.0015µF	1000	23.5 x 5.1 x 10.7	✳	.09	.05	.04
26868CP	MY.0022	.0022µF	100	6.0 x 3.0 x 10.0	✳	.10	.06	.04
26876CP	MY.0047	.0047µF	100	6.0 x 3.0 x 9.0	✳	.14	.13	.11
207829CP	MY.0068/220	.0068µF	220	18.0 x 5.5 x 10.0	✳	.10	.06	.04
26884CP	MY.01	.01µF	100	6.0 x 3.0 x 7.0	✳	.10	.06	.04
207837CP	MY.018/50	.018µF	50	6.1 x 2.6 x 11.3	✳	.09	.05	.04
26905CP	MY.022	.022µF	100	6.0 x 3.0 x 10.0	✳	.15	.10	.06
26921CP	MY.033	.033µF	100	8.0 x 4.0 x 11.0	✳	.15	.10	.06
207861CP	MY.033/400	.033µF	400	11.0 x 4.0 x 8.0	✳	.10	.06	.04
26930CP	MY.047	.047µF	100	8.0 x 4.0 x 12.0	✳	.15	.10	.06
135562CP	MY.1/50	.1µF††	50	14.0 x 6.0 x 12.0	✳	.13	.09	.05
26956CP	MY.1	.1µF	100	12.5 x 5.0 x 9.5	✳	.17	.12	.07
93921CP	MY.1/250	.1µF	250	12.5 x 5.5 x 10	✳	.19	.16	.13
135546CP	MY.22/50	.22µF	50	17.0 x 9.0 x 16.0	✳	.23	.21	.19
26972CP	MY.22	.22µF	100	12.5 x 5.5 x 10	✳	.19	.12	.085
93964CP	MY.33/250	.33µF	250	18.0 x 7.0 x 12.5	.32	.25	.21	.19
26999CP	MY.47	.47µF	100	18.0 x 6.0 x 11.5	.32	.25	.20	.17
27001CP	MY1	1µF	100	18.0 x 7.5 x 14.0	.59	.49	.44	.31
93981CP	MY1/250	1µF	250	26.0 x 9.0 x 16.0	.89	.69	.49	.29
93999CP	MY2.2/250	2.2µF	250	26.0 x 9.0 x 16.0	.75	.65	.55	.45

†† ±20% tolerance *Capacitor dimensions and styles may vary

Dipped Tantalum Capacitors (±10%)
Resin Dipped Solid Tantalum Capacitors

• Flame retardant coating • Exceptional temperature stability
• Low leakage current • Moisture-resistant
• Designed for entertainment and commercial equipment

Operating temp. range	-55°C to +85°C (+125°C with derating)
Rated voltage DC	≤ + 85°C

†**Cross References:**

Panasonic: EF Series; **AVX:** Tap Series; **Sprague:** 196D and 199D; **Kemet:** T350/ T360; **Mepco:** 49GS; **NEC:** DN; **Nichicon:** 599; **NIC:** NDTM; **Hitachi:** TSD-3; **Matsuo:** 202

✳Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref No.†	Capacitance	Voltage (V)	Size (mm)* D x H	Pricing 1	10	100	1000
33486CP	TM.1	.1µF	35	4.5 x 7.0	✳	$.25	$.20	$.18
33507CP	TM.22	.22µF	35	4.5 x 7.0	✳	.25	.19	.15
33523CP	TM.33	.33µF	35	4.5 x 7.0	✳	.17	.15	.13
33531CP	TM.47	.47µF	35	4.5 x 7.0	✳	.25	.19	.17
154860CP	TM1/25	1µF	25	3.0 x 6.0	✳	.29	.25	.22
33662CP	TM1	1µF	35	4.5 x 7.0	✳	.29	.25	.22
94001CP	TM2.2/16	2.2µF	16	4.5 x 7.0	✳	.29	.25	.22
94019CP	TM2.2/25	2.2µF	25	4.5 x 7.0	✳	.35	.29	.25
33734CP	TM2.2	2.2µF	35	4.5 x 7.5	.39	.35	.29	.25
33769CP	TM3.3	3.3µF	35	4.5 x 7.5	.63	.56	.49	.39
94035CP	TM4.7/16	4.7µF	16	4.5 x 7.5	.47	.38	.28	.20
94043CP	TM4.7/25	4.7µF	25	5.0 x 8.5	.50	.45	.39	.35
33806CP	TM4.7	4.7µF	35	5.5 x 9.0	.55	.48	.37	.27
33873CP	TM6.8	6.8µF	35	6.0 x 10.0	.62	.55	.40	.36
94060CP	TM10/16	10µF	16	5.0 x 9.0	.45	.40	.31	.26
94078CP	TM10/25	10µF	25	5.5 x 9.0	.59	.50	.40	.36
33689CP	TM10	10µF	35	6.0 x 10.0	.89	.79	.69	.59
33718CP	TM15	15µF	25	6.0 x 10.0	.89	.79	.69	.59
33751CP	TM22	22µF	6.3	5.0 x 9.0	.45	.35	.31	.27
94094CP	TM22/16	22µF	16	6.0 x 10.0	.69	.59	.49	.45
94107CP	TM22/25	22µF	25	7.0 x 10.5	1.79	1.60	.93	.89
33785CP	TM33	33µF	25	8.0 x 13.0	2.59	2.25	1.79	1.22
94123CP	TM47/16	47µF	16	8.0 x 13.0	1.69	1.55	1.36	.99
33822CP	TM47	47µF	25	9.0 x 14.5	3.29	2.95	2.65	2.39
33700CP	TM100	100µF	6.3	7.0 x 10.5	1.19	1.09	.95	.85

*Capacitor dimensions and styles may vary

5mm Ceramic Trimmer Capacitor

• Working voltage: 200VDC
• Withstand voltage: 400VDC
• Turning torque: 35-200 g-cm
• Operating temperature range: -30°C~+85°C
• Insulation resistance: >10MΩ min. @ 250VDC

Part No.	Capacitance Range (pF)	Q Factor @ 1MHz	Color Codes	Pricing 1	10	100	1000
136979CP	9.0-50.0	> 200	Green	$.89	$.79	$.69	$.59

8mm .315" Ceramic Trimmer Capacitors (250WVDC) Thru Hole

• Working voltage: 250VDC
• Withstand voltage: 550VDC
• Turning torque: 40~200 g-cm
• Operating temperature range: -55°C~+85°C
• Insulation resistance: 10MΩ min. @ 250VDC

134818CP   **94449CP**

Part No.	Capacitance Range (pF)	Q Factor @ 1MHz	Color Codes	Pricing 1	10	100	1000
134818CP	3.5–13.0	> 300	Ivory	$.69	$.55	$.42	$.29
32838CP	4.0–34.0	> 300	Yellow	.99	.79	.69	.59
32854CP	6.0–70.0	> 200	Nil	1.05	.85	.75	.65
94449CP	8.5–100	> 200	Purple	1.05	.93	.81	.77
94465CP	8.5–120	> 200	Nil	.99	.79	.65	.59

Memory Back-Up Capacitors

Applications:
• Back-up on CMOS microcomputers, static RAM, DTSs (digital tuning systems)
• Memory back-up of remote controllers

142922CP

Features:
• Excellent voltage holding characteristics for low back-up currents
• Small size vs. capacitance • Voltage: 5.5VDC
• Capacitance ranges from .047 to 1F

Capacitor dimensions and lead spacing may vary
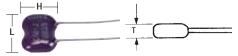
Part No.	Mfr. Cross Ref. No.	Capacitance (Farad)	Pricing 1	10	100
142922CP	MBC.047/5.5	.047	$1.65	$1.43	$1.25
142949CP	MBC.22/5.5	.22	2.29	1.99	1.60
143010CP	MBC.47/5.5	.47	3.49	2.95	2.25
142957CP	MBC1.0/5.5	1.0	4.75	4.29	3.49

Dipped Silver Mica Capacitors (±5%)
Metallized Polyester Film Capacitors

Case type	DM15
Lead space (in.)	.23
Tolerance	±5%
Operating temperature range	-55°C to +125°C
Size (mm) – L x T x H*	11 x 4 x 9

*Capacitor dimensions and style may vary

Part No.	Mfr. Cross Ref. No.	Capacitance	Volt. (V)	Pricing 1	10	100	1000
15991CP	DM100	10pF	500	$.49	$.39	$.29	$.25
16037CP	DM220	22pF	500	.49	.39	.29	.23
16070CP	DM330	33pF	500	.49	.39	.29	.23
16096CP	DM470	47pF	500	.45	.37	.31	.28
16002CP	DM101	100pF	500	.49	.39	.31	.27
16088CP	DM331	330pF	500	.95	.75	.55	.35
16109CP	DM471	470pF	500	1.05	.95	.79	.65
16011CP	DM102	1000pF	100	1.09	.97	.89	.75

See page 81 for Surface Mount Resistors.

.021" lead dia.   1.08"   .250"   1.08"   .09" body dia.

Single Resistor Value Pricing: 1/4-Watt Carbon Film Resistors (±5%)

To order: Use 5-digit part number adjacent to ohms in chart below
Values may not be combined for quantity price breaks

99¢/bag 100 piece bags

Pricing (Sold in bags of 100 pieces)				
Specify Part No. & Resistor Value	1 Bag	10 Bags	50 Bags	100 Bags
(see Standard Resistor Value Chart below)	$.99/bag	$.57/bag	$.49/bag	$.46/bag

Assortment Pricing: 1/4-Watt Carbon Film Resistor (±5%)

Assortments may not be combined for quantity price breaks

Part No.	Description (Including bulk pack values)	1	10	25
10719CP	5 ea. 70 values (every other value from 10Ω - 5.6 MΩ) (350 pcs.)	$9.95	$8.95	$7.95
103165CP	10 ea. 24 values marked (●) and 50 ea. 6 values marked (✗) (540 pcs.)	12.95	11.49	9.95
10663CP	100 ea. 27 values marked (▲) (2,700 pcs.)	24.95	22.49	20.49
10655CP	100 ea. 160 values (all resistor values in the chart below) (16,000 pcs.)	119.95	107.95	96.95
81832CP	1/4-watt resistor component cabinet kit – 30 values (540 pcs.), pg 106	27.95	24.95	22.49

Bulk Pack resistor values can be special ordered in quantities of 1000 pieces by phone or fax. Please include ohms desired. $10.95/k

▲● see table on top right

Standard Resistor Values Chart

Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms	Part No.	Ohms
Bulk Pack	2.2	Bulk Pack	15	29946CP ▲✗	100	31499CP ▲●	680	31026CP ▲✗	4.7k	30841CP ▲●	33k	30525CP	220k	Bulk Pack	1.5M
Bulk Pack	2.4	Bulk Pack	16	Bulk Pack	110	Bulk Pack	750	31237CP ▲●	5.1k	Bulk Pack	36k	Bulk Pack	240k	Bulk Pack	1.6M
Bulk Pack	2.7	Bulk Pack	18	30082CP	120	Bulk Pack	820	31270CP ▲●	5.6k	Bulk Pack	39k	Bulk Pack	270k	Bulk Pack	1.8M
Bulk Pack	3.0	Bulk Pack	20	Bulk Pack	130	Bulk Pack	910	Bulk Pack	6.2k	Bulk Pack	43k	Bulk Pack	300k	Bulk Pack	2.0M
Bulk Pack	3.3	Bulk Pack	22	30162CP ▲●	150	29663CP ▲✗	1.0k	Bulk Pack	6.8k	31149CP ▲●	47k	Bulk Pack	330k	Bulk Pack	2.2M
Bulk Pack	3.6	Bulk Pack	24	Bulk Pack	160	Bulk Pack	1.1k	Bulk Pack	7.5k	Bulk Pack	51k	Bulk Pack	360k	Bulk Pack	2.4M
Bulk Pack	3.9	Bulk Pack	27	Bulk Pack	180	29735CP ●	1.2k	Bulk Pack	8.2k	Bulk Pack	56k	Bulk Pack	390k	Bulk Pack	2.7M
Bulk Pack	4.3	Bulk Pack	30	Bulk Pack	200	Bulk Pack	1.3k	Bulk Pack	9.1k	Bulk Pack	62k	Bulk Pack	430k	Bulk Pack	3.0M
Bulk Pack	4.7	Bulk Pack	33	30470CP ▲✗	220	29760CP ▲●	1.5k	29911CP ▲✗	10k	Bulk Pack	68k	31202CP ▲●	470k	Bulk Pack	3.3M
Bulk Pack	5.1	Bulk Pack	36	Bulk Pack	240	Bulk Pack	1.6k	Bulk Pack	11k	Bulk Pack	75k	Bulk Pack	510k	Bulk Pack	3.6M
Bulk Pack	5.6	Bulk Pack	39	30605CP ▲●	270	Bulk Pack	1.8k	Bulk Pack	12k	Bulk Pack	82k	Bulk Pack	560k	Bulk Pack	3.9M
Bulk Pack	6.2	Bulk Pack	43	Bulk Pack	300	30277CP ▲●	2.0k	Bulk Pack	13k	Bulk Pack	91k	Bulk Pack	620k	Bulk Pack	4.7M
Bulk Pack	6.8	31106CP ▲●	47	30867CP ▲●	330	30314CP ▲●	2.2k	30146CP ▲●	15k	29997CP ▲✗	100k	Bulk Pack	680k	Bulk Pack	5.1M
Bulk Pack	7.5	Bulk Pack	51	Bulk Pack	360	Bulk Pack	2.4k	Bulk Pack	16k	Bulk Pack	110k	Bulk Pack	750k	Bulk Pack	5.6M
Bulk Pack	8.2	Bulk Pack	56	30963CP ●	390	30390CP ▲●	2.7k	Bulk Pack	18k	Bulk Pack	120k	Bulk Pack	820k	Bulk Pack	6.2M
Bulk Pack	9.1	Bulk Pack	62	Bulk Pack	430	Bulk Pack	3.0k	Bulk Pack ●	20k	Bulk Pack	130k	Bulk Pack	910k	Bulk Pack	6.8M
29882CP ▲●	10	Bulk Pack	68	31165CP ▲●	470	30672CP ▲●	3.3k	30453CP ▲●	22k	Bulk Pack	150k	29698CP ▲●	1.0M	Bulk Pack	7.5M
Bulk Pack	11	Bulk Pack	75	Bulk Pack	510	Bulk Pack	3.6k	Bulk Pack	24k	Bulk Pack	160k	Bulk Pack	1.1M	Bulk Pack	8.2M
Bulk Pack	12	Bulk Pack	82	31376CP	560	Bulk Pack	3.9k	Bulk Pack	27k	Bulk Pack	180k	Bulk Pack	1.2M	Bulk Pack	9.1M
Bulk Pack	13	Bulk Pack	91	Bulk Pack	620	Bulk Pack	4.3k	Bulk Pack	30k	Bulk Pack	200k	Bulk Pack	1.3M	29938CP ▲●	10M

1/8 & 1/2-Watt Carbon Film Resistors (±5%)

Any 1/8 or 1/2-Watt Resistor value (below) can be special ordered – 1000 pc minimum
• 1/8-W – $12.95/k (bulk)   • 1/2-W – $15.95/k (bulk)

1/8-Watt Carbon Film Resistor (±5%) Assortments

Part No.	Cross Ref. No.	Values included	Description (see chart below)	Pricing 1	Pricing 10
108302CP	ASST1830	✗ #	10 ea. of 24 values marked by ✗ and 50 ea. of 6 values marked below by # (540 pcs.)	$12.95	$11.49
108290CP	ASST1827	✔	100 ea. of 27 values marked by ✓ (2,700 pcs.)	29.95	26.95
108329CP	CAB182R	– –	1/8-watt resistor component cabinet kit – 30 values (540 pcs.), see page 106	24.95	22.49

1/8 & 1/2-Watt Resistor Assortments Value Chart (Ohms)

10 ✓✗	150 ✓✗	330 ✓✗	680 ✓✗	2.0k ✓✗	3.3k ✓✗	5.6k ✓✗	15k ✓✗	33k ✓✗	470k ✓✗
47 ✓✗	220 ✓#	390 ✗	1.0k ✓✗	2.2k ✓✗	4.7k ✓✗	6.8k ✗	22k ✓✗	47k ✓✗	1.0M ✓✗
100 ✓#	270 ✓✗	470 ✓✗	1.5k ✓✗	2.7k ✓✗	5.1k ✓✗	10k ✓#	27k ✗	100k ✓#	10M ✓✗

(✓), (✗), (#) symbols indicate Resistor values included in Assortments above and below.

Any 1/8 or 1/2-Watt Resistor value (above) can be special ordered – 1000 pc minimum
• 1/8-W – $12.95/k (bulk)   • 1/2-W – $15.95/k (bulk)

1/2-Watt Carbon Film Resistor (±5%) Assortments

Part No.	Cross Ref. No.	Values Included	Description (see chart above)	Pricing 1	Pricing 10
107852CP	ASST1230	✗ #	10 ea. of 24 values marked by ✗ and 50 ea. of 6 values marked by # (540 pcs.)	$14.95	$13.49
107844CP	ASST1227	✔	100 ea. of 27 values marked by ✓ (2,700 pcs.)	34.95	31.49
107836CP	ASST1270	–	5 ea. of 70 values (every other value from 10Ω - 5.6MΩ)(350 pcs.) (see chart above)	10.95	9.95
107879CP	CAB12R	–	1/2-watt resistor component cabinet kit – 30 values (540 pcs.), see page 106	29.95	26.95

Resistor Networks (±2%)

Single-In-Line "SIP" Resistor Networks
8 and 10-Pin Bussed (125mW/Resistor) ±2%

Features (8BRN/10BRN):
- **8-pin package (7 resistors) = 8BRN
  10-pin package (9 resistors) = 10BRN**
- Rated power per resistor at 70°C: 125mW/ resistor
- Operating temperature range: -55°C to +125°C
- Resistance temperature coefficient: 200ppm/°C
- Max. working voltage: 100V or rated power x resistance, whichever is smaller
- Insulation resistance: 10,000MΩ min. at 100V
- Solderability: per MIL-R-83401
- Low profile 5mm (.200" body ht.)
- Low profile is compatible w/ DIPs
- Cermet thick film construction

MAX   2.54 max   6.0 max   0.25 ±0.1   3.46 ±0.1   L MAX   0.50 ±0.1   ±0.1 max   1.2 max
Dimensions: mm

Part No.	Pins	Ohms
97826CP	8	10k
97851CP	10	330
97869CP	10	470
97877CP	10	1.0k
97893CP	10	2.2k
24660CP	10	4.7k
24643CP	10	10k
98087CP	10	47k
98095CP	10	100k

✳ 10 piece minimum

Pricing per each			
1	10	100	1000
✳ $.26	$.22	$.16	

Pricing for P/N 97826			
✳ $.22	$.19	$.13	

Dual-In-Line "DIP" Resistor Networks
16-Pin Isolated (140mW/Resistor) ±2%

Features (16IRN):
- Maximum operating voltage: 100V   • Tolerance: ±2%
- Temperature coefficient: ±100ppm/°C
- Operating temp.: -55°C to +125°C
- Insulation resistance: 10,000MΩ min.
- Lead solderability/solvent resistance: meets requirements of MIL-R-83401
- Power rating at 70°C: 2.25 watts
- Compatible with automatic insertion equipment
- Copper leads for excellent heat dissipation

16 pins

Part No.	Ohms
164005CP	33
108556CP	100
108564CP	220
108572CP	330
108581CP	470
108599CP	1.0k
108610CP	4.7k
108628CP	10k
108644CP	100k

Pricing per each			
1	10	100	1000
$.49	$.43	$.37	$.31

SIP and DIP Resistor Network Cross Reference Chart

Jameco	CTS	A – B	Bourns	Dale	Beckman	Sprague	MEPCO
8BRN…	770-81-R…	708A…	4608X-101…	CSC08A01…	L08-1-R…	356CF… X2PD	9S08… GL002
10BRN…	770-101-R…	710A…	4610X-101…	CSC10A01…	L10-1-R…	256CX… X2PD	9S10… GL002
16IRN…	761-3-R…	316B…	4116R-001…	MDP16-03…	898-3-R…	916C… X5SR	D16H… 12-J

Color Code Legend   New   Sale   Qty. Save

5-Watt Linear Taper Wire Wound (±20%)

140513CP

- Temperature range: -10˚C to 70˚C
- Shaft diameter: 0.23" (6mm)
- Shaft length: 0.67", except P/N 140521CP (0.25")
- Mounting hole: 0.32"
- Max. panel thickness: 0.1" • Non-rotational key

Includes: Mounting hardware

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	50	100
140513CP	PW5B100	100	$2.99	$2.69	$2.39	$2.15
140521CP	PW5B500	500	2.95	2.65	2.39	2.15

2-Watt Linear Taper (±20%)

- Temp. range: -10˚C to +70˚C
- Shaft diameter: 0.25"
- Mounting hole: 0.375"
- Non-rotational key • Length: 0.825"
- Base length: 0.25" • See knobs, pg 115

Includes: Mounting hardware

123959CP

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
123959CP	PT1K	1k	$3.29	$2.99	$2.65	$2.39
123967CP	PT5K	5k	3.29	2.99	2.65	2.39

CLAROSTAT 2-Watt Linear Taper (±10%)

- 2W @ 70˚C ambient
- Conductive plastic element
- Military No.: RV4N-AYSD
- Temp. range: -55˚C to +120˚C
- Non-rotational key
- Shaft: dia.: 0.25"; length: 0.875"
- Mounting hole: 0.375"
- Max. panel thickness: 0.25"
- See knobs page 115

95417CP

3/8 - 32 NEF-2A [9.52mm]
.250 Dia [6.35mm]
.56"
1.04"
Bushing Length
Shaft Length
Mounting Surface

Includes: Mounting hardware

Part No.	Product No.	Ohms	1	10	50	100
183610CP	53C3-500	500	$7.95	$6.95	$5.95	$5.25
13936CP	CMU1021	1k	7.95	6.95	5.95	5.25
13995CP	CMU5021	5k	7.95	6.95	5.95	5.25
13952CP	CMU1031	10k	7.49	7.12	5.99	5.49
95417CP	CMU5031	50k	7.95	6.95	5.95	5.25
13979CP	CMU1041	100k	7.95	6.95	5.95	5.25

1/2-Watt Linear Taper (±10%)

- Temperature range: -55˚C to +125˚C
- Non-rotational key
- Non-slotted shaft end
- Mounting hole: 0.3125"
- Shaft diameter: 0.25"
- Shaft length: 0.5625"
- Max. panel thickness: 0.1875"

29081CP

.45" 11.43mm
.95"
.25" 6.35mm
.25" 6.35mm

Includes: Mounting hardware

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
29049CP	P1K	1k	$.99	$.79	$.65	$.55
29196CP	P5K	5k	.99	.79	.65	.55
29081CP	P10K	10k	.99	.79	.65	.55
29102CP	P100K	100k	.99	.79	.65	.55
29065CP	P1MEG	1M	.99	.79	.65	.55

See pages 105 & 107 for Potentiometer Cabinet Kits & Grab Bags.

3/4-Watt, 3/4" Rectangular 15-Turn Linear Cermet (±10%)
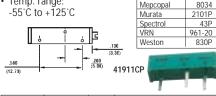
- PC pins: .100" grid (2.54mm)
- Side adjusting
- Sealed to guard against contaminants
- Temp. range: -55˚C to +125˚C

.580 (12.70) .200 (5.08) .130 (3.30)

41911CP

Cross Reference Chart

Equivalent to:	
Allen Bradley	94P
Beckman	89PR
Bourns	3006P
Litton	6034Y
Mepcopal	8034
Murata	2101P
Spectrol	43P
VRN	961-20
Weston	830P

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
181972CP	43P201	200	$1.15	$.92	$.69	$.48
41937CP	43P500	500	1.15	.99	.89	.69
41785CP	43P1K	1k	1.15	.99	.89	.79
41865CP	43P2K	2k	1.15	.99	.89	.69
41890CP	43P5K	5k	1.15	.99	.89	.69
41822CP	43P10K	10k	1.15	.99	.89	.69
41873CP	43P20K	20k	1.15	.99	.89	.69
41911CP	43P50K	50k	1.15	.99	.89	.69
41849CP	43P100K	100k	1.15	.99	.89	.69
63001CP	43P200K	200k	1.15	.99	.89	.69
41953CP	43P500K	500k	1.15	.99	.89	.69
41806CP	43P1MEG	1M	1.15	.99	.89	.69

1/4-Watt Miniature Linear (±20%)

X201 (19/32") Vertical Mount
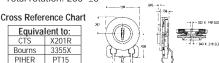
- 15mm thick
- Voltage rating: 350 VDC
- Reliable CTS composition resistance element
- Power rating:
  below 5kΩ – 1/4 watt @ 40˚C
  5kΩ & above – 1/4 watt @ 55˚C
- Total rotation: 260˚ ±5˚

94692CP

Cross Reference Chart

Equivalent to:	
CTS	X201R
Bourns	3355X
PIHER	PT15

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
94692CP	X201R1K	1k	$.45	$.35	$.31	$.28
35502CP	X201R252B	2.5k	.45	.35	.31	.28
94705CP	X201R5K	5k	.45	.35	.31	.28
94713CP	X201R10K	10k	.45	.35	.31	.28
172136CP	X201R25K	25k	.45	.35	.31	.28
94721CP	X201R50K	50k	.45	.35	.31	.28
94730CP	X201R100K	100k	.43	.33	.31	.28

0.2-Watt Linear Taper (±20%)

- Number of detents: 10
- Shaft diameter: 0.235"
- Shaft length: 0.605"
- Insulation resistance: 100MΩ @ 500VDC
- Mounting hole: 0.27"
- Max. panel thickness: 0.15"
- Max. operating voltage: 150VAC
- Rotational life: 15,000 cycles

Includes: Mounting hardware

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
163563CP	PMD401	10k	$1.65	$1.35	$.99	$.69

1/2-Watt, 3/8" Square, Single-Turn Cermet (±10%)

- 1/2 watt linear taper @ 70˚C
- PC pins: .100" grid (2.54mm)
- Sealed to guard against contaminants
- Pin spacing: 0.1" († P/N 43060CP & P/N 105216CP: 0.2")
- Top adjusting
- Temp. range: -55˚C to +125˚C

42964CP

Cross Reference Chart

Equivalent to:	
Allen Bradley	E2B
Beckman	72PR
Bourns	3386P
Mepcopal	8038
Murata	3104P
Spectrol	63P
VRN	780-12P
Weston	840P

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
43123CP	63P500	500	$.79	$.65	$.55	$.45
42964CP	63P1K	1k	.79	.65	.55	.45
43043CP	63P2K	2k	.79	.65	.55	.45
43078CP	63P5K	5k	.79	.65	.55	.45
43001CP	63P10K	10k	.79	.65	.55	.45
43051CP	63P20K	20k	.79	.65	.55	.45
43107CP	63P50K	50k	.79	.65	.55	.45
43027CP	63P100K	100k	.79	.65	.55	.45
43060CP	63P300K †	300k	.79	.63	.49	.35
63212CP	63P500K	500k	.79	.65	.55	.45
42981CP	63P1MEG	1M	.79	.65	.55	.45
105216CP	63P2MEG†	2M	.79	.63	.49	.35

BOURNS Multi-Turn (±10%)

- Resistance tolerance: ±10%
- Insulation resistance: (500VDC) 1000MΩ min.

Series 3299:
- 25-turn; cermet type
- Absolute minimum resistance: 2Ω or 1% max.
- Load life: 200 cycles, 0.5W

Series 3299

Series 3540:
- 10-turn; wirewound
- Absolute minimum resistance: 1Ω or 0.1% max.
- Load life: 1000 hours, 2W

Series 3540

Part No	Product No.	Ohms	Pricing		
			1	10	50
183556CP	3299W-1-102	1k	$2.49	$2.19	$1.99
183564CP	3299W-1-103	10k	2.49	2.19	1.99
183572CP	3299W-1-104	100k	2.49	2.19	1.99
183548CP	3540S-1-502	5k	12.49	11.59	10.15
183521CP	3540S-1-103	10k	12.49	11.59	10.15
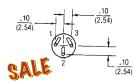
1/2-Watt, 1/4" Round, Cermet (±10%)

- Sealed to withstand wave soldering and immersion cleaning process
- Extended temperature range: -55˚C to +150˚C • TO-5 grid
- Top adjustment
- Terminals: solderable pins

.10 (2.54) .10 (2.54) .10 (2.54)

95484CP

Cross Reference Chart

Equivalent to:	
Beckman	82M
Bourns	3329P
Mepcopal	8050
MEC	471
Murata	3321P
Spectrol	62-3
VRN	171
Weston	567

Part No.	Mfr. Cross Ref. No.	Ohms	Pricing			
			1	10	100	500
95441CP	3329P1K	1k	$1.99	$1.59	$1.19	$.84
95450CP	3329P5K	5k	1.69	1.39	1.27	1.15
96719CP	3329P10K	10k	1.95	1.69	1.49	1.39
95484CP	3329P100K	100k	1.79	1.49	1.19	.99
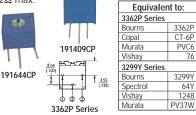
1/2-Watt Trimming Potentiometers (±10%)

- Linear taper
- Absolute min. resistance: 1% or 2Ω max.
- Contact resistance variation:
  1% or 3Ω max.
- Insulation resistance:
  500VDC; 1,000MΩ min.
- Rotational life: 200 cycles
- Terminals: solderable pins

191644CP
191409CP

Cross Reference Chart

Equivalent to:	
3362P Series	
Bourns	3362P
Copal	CT-6P
Murata	PVC6
Vishay	76
3299Y Series	
Bourns	3299Y
Spectrol	64Y
Vishay	1248
Murata	PV37W

3362P Series
- Top adjustment: 240° nominal
- Wiper positioning: 50% nominal

3362P Series

Part No.	Mfr. Cross Ref. No.	Ohms	1	10	100	500
191644CP	3362P-1-200	20	$.29	$.25	$.22	$.19
189341CP	3362P-1-500	50	.59	.55	.45	.41
182810CP	3362P-1-501	500	.77	.66	.41	.29
182828CP	3362P-1-502	5k	.77	.65	.55	.48
182836CP	3362P-1-103	10k	.77	.65	.55	.48
182844CP	3362P-1-204	200k	.77	.65	.55	.48
182852CP	3362P-1-105	1M	.77	.65	.55	.48

3299Y Series • 3/8" square, 25-turn potentiometer
- Load Life: 1,000 hours 0.5W @ 70°C • Wipers set @ CW end

Part No.	Mfr. Cross Ref. No.	Ohms	1	10	100
191417CP	3299Y-1-501	500	$2.25	$2.09	$1.65
191396CP	3299Y-1-102	1k	2.25	2.09	1.65
191425CP	3299Y-1-502	5k	2.25	2.09	1.65
191409CP	3299Y-1-104	100k	2.25	2.09	1.65

NTC Thermistors

- Typical applications: temperature measurement/control/compensation; power supply fan control; PCB temperature monitoring
- Operating temperature range: -30°C ~ +130°C
- Maximum allowable power (@ 250°C): 0.55W
- Thermal dissipation factor: 6.5mW/0C (@ 250°C)
- Resistance value allowable difference: 10%

Part No.	Mfr. Cross Ref. No.	Resistance (Ω @ 25°C)	B Constant (25/50°C >10%)	Temp. Coef. @ 25°C (%/°C)	Pricing 1	10	100	500
207520CP	NTC-101	100	3100	-3.5	$.59	$.53	$.40	$.33
207511CP	NTC-201	200	3100	-3.5	.59	.53	.40	.33
207503CP	NTC-301	300	3100	-3.5	.59	.53	.40	.33
207491CP	NTC-501	500	3100	-3.5	.59	.53	.40	.33
207482CP	NTC-102	1k	3800	-4.3	.59	.53	.40	.33
207474CP	NTC-202	2k	3800	-4.3	.59	.53	.40	.33
207466CP	NTC-302	3k	3900	-4.4	.59	.53	.40	.33
207458CP	NTC-402	4k	3900	-4.4	.59	.53	.40	.33
207440CP	NTC-502	5k	3900	-4.4	.59	.53	.40	.33
207036CP	NTC-103	10k	4100	-4.6	.59	.53	.40	.33
207028CP	NTC-153	15k	4100	-4.6	.59	.53	.40	.33
207010CP	NTC-203	20k	4200	-4.7	.59	.53	.40	.33
207001CP	NTC-503	50k	4200	-4.7	.59	.53	.40	.33
206990CP	NTC-104	100k	4400	-4.9	.59	.53	.40	.33
206981CP	NTC-204	200k	4500	-5.1	.59	.53	.40	.33

High Current Toroid Inductors

5700 Series
- Low radiation
- Low core loss
- High current capacity
- Size: A = 22.22mm max.; B = 11.09mm max.; C = 15.0±1.0mm; D = 1.2±0.5mm

Part No.	L (µH)	IDC max. (A)	L min. @ IDC	1	50	100	250
208258CP	10	11.0	5	$2.99	$2.69	$2.39	$2.19
208266CP	25	5.5	12	2.99	2.69	2.39	2.19
208311CP	50	9.5	25	3.99	3.59	3.19	2.89
208303CP	75	5.0	40	3.39	2.99	2.69	2.39
208274CP	125	2.75	70	2.99	2.69	2.39	2.19
208320CP	150	4.75	85	3.99	3.59	3.19	2.89
208282CP	275	2.0	150	3.39	2.99	2.69	2.39
208291CP	450	1.5	250	3.39	2.99	2.69	2.39

Axial Leaded RF Chokes

4600 Series
- Inductive tolerance: 10%
- Test frequency: 7.9MHz
- Size: A = 6.8mm max.; B = 19.0mm max.; C = 25.0±2.0mm; D = 0.65±0.5mm

Part No.	L (µH)	Q (min.)	Res. Freq Min. (MHz)	DCR Max. (µ)	Max. DC Current (mA)	Pricing 1	100	250
208063CP	1.0	60	190	.050	2000	$.89	$.69	$.49
208071CP	1.5	58	149	.093	1800	.89	.69	.49
208080CP	2.4	56	120	.190	1500	.89	.69	.49
208098CP	3.9	60	93	.450	1000	.89	.69	.49
208101CP	5.5	57	80	.670	850	.89	.69	.49
208119CP	6.2	57	76	.830	700	.89	.69	.49
208127CP	8.2	57	65	1.2	600	.89	.69	.49
208135CP	10	36	61	1.5	500	.89	.69	.49

Epoxy Conformal Coated Chokes

- Operating temperature: -25°C to +85°C
- Tolerance: 5%
- Size: A = 3.2mm max.; B = 7.0mm max.; C = 0.48±0.5mm (except P/N 208143: 0.50±.05mm); D = 63±3mm

Part No.	L (µH)	Q (min.)	Test. Freq (MHz)	Res. Freq Min. (MHz)	DCR Max. (µ)	Max. DC Curr. (mA)	Pricing 1	100	250
208143CP	10	60	7.96	28.7	1.56	670	$.49	$.39	$.29
208151CP	27	50	2.52	10.2	2.39	410	.49	.39	.29
208160CP	33	50	2.52	8.4	2.71	380	.49	.39	.29
208178CP	47	50	2.52	6.9	3.3	330	.49	.39	.29
208186CP	82	45	2.52	5.4	4.62	240	.49	.39	.29
208194CP	100	45	2.52	5.0	4.98	240	.49	.39	.29
208207CP	220	45	0.796	3.3	9.23	180	.49	.39	.29
208215CP	330	45	0.796	2.7	13.2	140	.49	.39	.29
208223CP	470	45	0.796	2.2	21.4	120	.49	.39	.29
208231CP	820	45	0.796	1.7	28.4	90	.49	.39	.29
208240CP	1000	45	0.796	1.5	31.3	80	.49	.39	.29

LA Series Varistors (Radial Lead)

- AC power line applications   • Power supplies
- UL recognized as "transient voltage surge suppressors"
- UL recognized as "across-the-line components"
- High energy absorption

SALE

❋ Prepackaged: order in increments of 10, 100 or 1000

34446CP   **34462CP**

LA Series		Size	Max. Ratings (+85°C)			Characteristics at 25°C		Pricing			
			Continuous		Transient	Max Clamping Volt.					
		Disc.	RMS Volt.	DC Volt.	Energy (10/1000µs)	@ Ip Value Curr. (8/20µs)					
Part No.	Mfr. Cross Ref. No.	Dia. (mm)	V_m(ac) Volts	V_m(dc) Volts	W_tm Joules	V Volts	Ip=2.0A Amps	1	10	100	1000
34454CP	V130LA2	7	130	175	11	340	10	❋	$.20	$.18	$.16
34446CP	V130LA10A	14	130	175	38	340	50	.55	.49	.45	.39
34471CP	V250LA20A	14	250	330	72	650	50	.58	.52	.47	.42
34462CP	V130LA20A	20	130	175	70	340	100	.54	.52	.50	.48

ZA Series Varistors (Radial Lead)

- Low DC voltage applications
- UL recognized as "transient voltage surge suppressors"
- Used for highly sensitive devices
- Low transient energy
- Printed circuit board designs
- Computer equipment   • Alarm systems

SALE

❋ Prepackaged: order in increments of 10, 100 or 1000

96891CP

ZA Series		Size	Characteristics at 25°C					Pricing			
			Varistor Voltage			Max. Clamping Volt.					
		Disc.	@ 1 mA DC Test Current			@ Ip Value Curr. (8/20µs)					
Part No.	Mfr. Cross Ref. No.	Dia. (mm)	Min. Volts	V_N(dc) Volts	Max. Volts	V Volts	Ip=2.0A Amps	1	10	100	1000
96891CP	V8ZA1	7	6.0	8.2	11.0	22	5	❋	$.13	$.12	$.11
190449CP	V18ZA1	7	16.0	18.0	20.0	35	2.5	.29	.25	.22	.19

Color Code Legend
New Sale Qty Save Closeout

Resettable Fuses

Resettable fuses improve reliability and lower costs. Polymer positive temperature coefficient (PPTC) fuses have provided designers in numerous industries a new tool in their battle to improve product quality and performance. As PPTC fuses are resettable, warranty costs and service calls are largely avoided.

RA Series

- Rated voltage: (V_{MAX}, V): 60
- Max. current (I_{MAX}, A): 40
- Lead length (D): 7.6mm (min.)
- Thickness (E): 3.1mm (min.)

Fig. 1   Fig. 2

Part No.	Mfr. Cross Ref. No.	Hold Curr. (I_H, A)	Trip Curr. (I_T, A)	Fig.	A	B	C	1	10	100	500
199814CP	RA010-60	0.10	0.20	1	7.4	12.7	5.1	**$.47**	**$.44**	**$.41**	**$.38**
199822CP	RA017-60	0.17	0.34	1	7.4	12.7	5.1	.47	.44	.41	.38
199831CP	RA020-60	0.20	0.40	1	7.4	12.2	5.1	.47	.44	.41	.38
199849CP	RA025-60	0.25	0.50	1	7.4	12.7	5.1	.47	.44	.41	.38
199857CP	RA030-60	0.30	0.60	1	7.4	13.0	5.1	.47	.44	.41	.38
199865CP	RA040-60	0.40	0.80	1	7.6	13.5	5.1	.51	.48	.45	.42
199873CP	RA050-60	0.50	1.00	1	7.9	13.7	5.1	.51	.48	.45	.42
199881CP	RA065-60	0.65	1.30	1	9.7	14.5	5.1	.52	.49	.46	.43
199890CP	RA075-60	0.75	1.50	1	10.4	15.2	5.1	.52	.49	.46	.43
199902CP	RA090-60	0.90	1.80	1	11.7	15.8	5.1	.53	.50	.48	.45
199911CP	RA110-60	1.10	2.20	2	13.0	18.0	5.1	.60	.57	.55	.46
199929CP	RA135-60	1.35	2.70	2	14.5	19.6	5.1	.61	.58	.56	.47
199937CP	RA160-60	1.60	3.20	2	16.3	21.3	5.1	.63	.59	.57	.48
199945CP	RA185-60	1.85	3.70	2	17.8	22.9	5.1	.65	.62	.59	.50
199953CP	RA250-60	2.50	5.00	2	21.3	26.4	10.2	.76	.73	.68	.53
199961CP	RA300-60	3.00	6.00	2	24.9	30.0	10.2	.81	.77	.72	.56
199970CP	RA375-60	3.75	7.50	2	28.5	33.5	10.2	.83	.78	.73	.56

RB Series
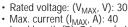
- Rated voltage: (V_{MAX}, V): 30
- Max. current (I_{MAX}, A): 40
- Lead length (D): 7.6mm (min.)
- Thickness (E): 3.0mm (min.)

Fig. 3   Fig. 4

Part No.	Mfr. Cross Ref. No.	Hold Curr. (I_H, A)	Trip Curr. (I_T, A)	Fig.	A	B	C	1	10	100	500
199988CP	RB090-30	0.90	1.80	3	7.4	12.2	5.1	**$.52**	**$.49**	**$.46**	**$.42**
199996CP	RB110-30	1.10	2.20	3	7.4	14.2	5.1	.52	.49	.46	.42
200002CP	RB135-30	1.35	2.70	3	8.9	13.5	5.1	.52	.49	.46	.42
200011CP	RB160-30	1.60	3.20	3	8.9	15.2	5.1	.56	.53	.51	.44
200029CP	RB185-30	1.85	3.70	3	10.2	15.7	5.1	.59	.57	.55	.47
200037CP	RB250-30	2.50	5.00	3	11.4	18.3	5.1	.63	.59	.57	.48
200045CP	RB300-30	3.00	6.00	4	11.4	17.3	5.1	.67	.64	.62	.51
200053CP	RB400-30	4.00	8.00	4	14.0	20.1	5.1	.81	.75	.71	.58
200061CP	RB500-30	5.00	10.00	4	14.0	24.9	10.2	.85	.80	.75	.62
200070CP	RB600-30	6.00	12.00	4	16.5	24.9	10.2	.89	.84	.79	.61
200088CP	RB700-30	7.00	14.00	4	19.1	26.7	10.2	.92	.88	.83	.64
200096CP	RB800-30	8.00	16.00	4	21.6	29.2	10.2	.99	.92	.86	.68
200109CP	RB900-30	9.00	18.00	4	24.1	29.7	10.2	1.05	.98	.90	.73

Fuse Clips

102859CP/119280CP: For 5mm miniature fuses
102841CP: For ¼" standard PCB type fuses
Prepackaged: order in increments of 10, 100 or 1000

102859CP 119280CP   102841CP

Part No.	Description	Size (H" x W" x D" x P")	10	100	1000
102859CP	Front leads	.37 x .25 x .21 x .19	$.12	$.09	$.05
119280CP	Side leads	.33 x .25 x .20 x .21	.09	.08	.07
102841CP	Front leads (10A)	.32 x .27 x .25 x .23	.09	.08	.07

Panel Mount Fuse Holders

102824CP   18702CP

1¼" x ¼" Standard Thumbscrew Cap
- Straight solder terminal; 10A @ 250VAC

Part No.	Approvals	Size	Mounting Hole	1	10	100	1000
120993CP	—	1.95"L x .71"Dia.	.58"Dia.	$.79	$.69	$.55	$.49
18702CP	UL/CSA	2.05"L x .71"Dia.	.58"Dia. x .52"Flat (D-style)	1.59	1.35	1.15	.99

5mm x 20mm Miniature Thumbscrew Cap
- Straight solder terminal; Size: 1.5"L x 0.6"Dia.

SALE

Part No.	Approvals	Current	Mounting Hole	1	10	100	1000
150463CP	—	6A @ 250VAC	.50"Dia. x .43"Flat	$.99	$.86	$.75	$.57
102824CP	UL/CSA	10A @ 250VAC	.50"Dia.	.99	.85	.72	.59

1¼" x ¼" Standard Fuses

Fast Acting Fuses (250V) AGC/3AG Fuses

- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Amps	Mfr.	10	100	1000
69403CP	250mA	Various	$.20	$.18	$.16
10410CP	500mA	Various	.20	.18	.16
197510CP	630mA	Various	.20	.18	.16
10372CP	1 amp	Various	.20	.12	.11
197528CP	1.6 amp	Various	.20	.12	.11
10381CP	2 amp	Various	.20	.12	.11
197536CP	2.5 amp	Various	.20	.12	.11
69438CP	3 amp	Various	.20	.12	.11
197544CP	4 amp	Various	.22	.20	.18
10401CP	5 amp	Various	.22	.20	.18
197552CP	6.3 amp	Various	.22	.20	.18
69462CP	10 amp	Various	.25	.22	.20
186301CP	16 amp	Various	.25	.22	.20

Slow Blow Fuses (250V) MDL/3AG Fuses

Part No.	Amps	Mfr.	1	10	100	1000
25654CP	250mA	Various	$.65	$.52	$.44	$.34
25689CP	500mA	Various	.65	.52	.44	.34
25638CP	1 amp	Various	.65	.52	.44	.34
25646CP	2 amp	Various	.59	.53	.34	.29
69534CP	3 amp	Various	.59	.53	.34	.29
25671CP	5 amp	Various	.59	.53	.34	.29
69569CP	10 amp	Various	.65	.52	.44	.34

5mm x 20mm Miniature Fuses

Fast Acting Fuses (250V) GMA Fuses

- Recommended for new designs
- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Amps	Mfr.	10	100	500	1000
103886CP	250mA	Various	$.20	$.15	$.11	$.10
102040CP	500mA	Various	.20	.15	.11	.10
103907CP	1 amp	Various	.20	.15	.11	.10
103915CP	2 amp	Various	.20	.15	.11	.10
103923CP	3 amp	Various	.20	.15	.11	.10
103931CP	5 amp	Various	.20	.15	.11	.10

Slow Blow Fuses (250V) GMA Fuses

- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Amps	Mfr.	10	100	1000
197501CP	500mA	Various	$.29	$.26	$.23
197464CP	1 amp	Various	.29	.26	.23
197472CP	2 amp	Various	.35	.32	.29
197481CP	3.15 amp	Various	.35	.32	.29
197499CP	5 amp	Various	.35	.32	.29

5mm x 20mm Miniature Low Profile Fuse Holder

- Accepts 5 x 20mm fuses
- 10A @ 250VAC
- Size: 1.4"L x 0.6"Dia.
- D Style mounting hole: 1 ea. 0.5"Dia x .46" flat

Part No.	Description	1	10	100
102832CP	Fuse holder UL/CSA	$1.95	$1.79	$1.59

In-Line Fuse Holders

- Built-in spring ensures good fuse connection
- Vinyl covered wire with stranded copper center
- Wire color: red; except for P/N 108783CP orange

102867CP

1¼" x ¼" Standard

Part No.	AWG	Wire Lgths	Body Size(L)	Body Color	1	10	100
109321CP	22	3.5/3"	2.4"	Black	$.65	$.58	$.52
102867CP	20	3/3"	2.2"	White	.65	.58	.48
151917CP	18	6/6"	2.4"	White	.99	.74	.52
108783CP	16	21/26"	2.2"	Black	.99	.87	.68
108791CP	14	19/25"	2.5"	Black	1.59	1.19	.83

5mm x 20mm Miniature

Part No.	AWG	Wire Color	Body Size (L)	1	10	100
109330CP	20	Red	1.8"	$.69	$.56	$.45

See the yellow & green highlighted items.

Jameco Special Values!

Details on page 4.

LED Displays

The general advantages of LED displays compared to incandescent types include:

- Lower power consumption
- Longer lifetime (averaged more than 300,000 hours)
- Compact size suitable for instrumentation and graphic representations

Soldering:

- Soldering bath: not more than 5 seconds @ 260°C
- Soldering iron: not more than 3 seconds @ 300°C under 30W

24740CP & 24782CP   17187CP   24723CP   200635CP

18737CP   18753CP   206017CP   32951CP   118906CP   202526CP

5"

7-Segment Displays

Part No.	Mfr. Cross Reference No.	Character Height	Illuminated Color	Buss Polarity*	Pins/ Leads	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Decimal Point #	Pricing 1	10	100	1000
24731CP	LSD3021-11	.300"	Red	CA	11	1.9 @ 20	0.3 @ 20	697	RHDP	$.95	$.76	$.68	$.61
24740CP	LSD3221-11	.300"	Red	CA	11	2.1 @ 20	2.5 @ 20	697	LHDP	.79	.72	.64	.58
151976CP	LTS312AY	.300"	Yellow	CA	11	2.8 @ 20	2.0 @ 10	585	LHDP	.89	.75	.65	.49
24782CP	LSD3211-11	.300"	Red	CC	10	2.1 @ 20	2.5 @ 20	697	RHDP	.89	.75	.65	.49
17187CP	LSD5051-11	.500"	Red	CC	10	2.1 @ 20	0.9 @ 20	697	RHDP	.89	.80	.72	.65
17208CP	LSD5061-11	.500"	Red	CA	10	2.1 @ 20	0.9 @ 20	697	RHDP	.89	.75	.65	.49
104213CP	LSD5124-10	.560"	Orange Red	CA	10	2.0 @ 20	2.4 @ 20	635	RHDP	.89	.80	.71	.55
199531CP	LSD5111-11	.560"	Red	CC	10	2.1 @ 20	0.8 @ 20	697	RHDP	.99	.89	.79	.72
24715CP	LDD5121-20	.560"	Red	2-digit CA	18	2.1 @ 20	0.8 @ 20	697	RHDP	1.25	1.05	.89	.75
24723CP	LDD5111-11	.560"	Red	2-digit CC	18	2.1 @ 20	0.8 @ 20	697	RHDP	1.25	1.05	.89	.75
200379CP	LB602VAGI	.560"	Red	2-digit CA	18	2.0 @ 10	16 @ 10	650	RHDP	1.39	1.12	.85	.60
24694CP	LDD5124	.560"	Orange Red	2-digit CA	18	2.0 @ 20	2.4 @ 20	635	RHDP	1.55	1.19	.89	.70
24707CP	LDD5114-20	.560"	Orange Red	2-digit CC	18	2.0 @ 20	2.4 @ 20	635	RHDP	1.35	1.15	.99	.89
200539CP	ELD556YWA	.560"	Yellow	2-digit CA	18	2.0 @ 10	1.9 @ 10	590	RHDP	1.25	.99	.75	.53
200635CP	LB603MF	.560"	Green	3-digit CA	28	2.1 @ 10	25 @ 10	563	RHDP	2.39	2.15	1.95	1.75
199582CP	LC56311	.560"	Yellow	CC	8	2.1 @ 20	5.2 @ 20	589	RHDP	1.49	1.34	1.19	.99
196787CP	LB602VA	.560"	Orange Red	2-digit CA	18	2.0 @ 20	16.0 @ 20	650	RHDP	1.59	1.29	.99	.79
18737CP	LSD816-11	.800"	Orange Red	CA	13	1.6 @ 20	0.9 @ 20	655	RHDP	1.45	1.20	.99	.74
18753CP	LSD8151-10	.800"	Red	CC	13	2.1 @ 20	1.0 @ 20	697	RHDP	1.49	1.35	1.19	.99
206017CP	SC08-11HWA	.800"	Red	CC	13	2.0 @ 20	.36 @ 10	700	RHDP	1.49	1.35	1.19	.94
176559CP	C8021-1	.800"	Green	CC	13	2.0 @ 20	0.9 @ 20	568	RHDP	.49	.42	.37	.33
97172CP	LSD10061-10	1.0"	Red	CA	10	2.1 @ 20	2.0 @ 20	697	RHDP	1.39	1.25	1.12	.99
97199CP	LSD23265-10	2.24"	Red	CA	10	1.7 @ 20	21 @ 20	660	RHDP	5.75	5.19	4.69	4.19
97201CP	LSD23255-10	2.24"	Red	CC	10	1.7 @ 20	21 @ 20	660	RHDP	4.49	3.95	3.25	2.95
202518CP	LSD30165-20	3.0"	Orange Red	CA	10	8 @ 20	4.5 @ 10	635	RHDP	7.39	6.99	6.65	6.29
202542CP	LSD30155-20	3.0"	Orange Red	CC	10	8 @ 20	4.5 @ 10	635	RHDP	5.95	5.35	4.82	4.34
105591CP	LSD40054-20†	4.0"	Orange Red	CC	10	2.0 @ 20	18 @ 20	635	RHDP	9.49	8.29	7.49	6.49
202500CP	LSD40064-20	4.0"	Orange Red	CA	10	2.0 @ 20	18 @ 10	635	RHDP	10.49	9.49	8.59	7.79
202526CP	LSD50065-20	5.0"	Red	CA	10	17 @ 20	45 @ 10	660	RHDP	34.99	27.89	25.29	22.79
202534CP	LSD50055-20	5.0"	Red	CC	10	17 @ 20	45 @ 10	660	RHDP	17.95	14.35	12.95	11.65

† 5 diodes per segment

Dot Matrix Displays

Part No.	Mfr. Cross Reference No.	Jameco Socket Number	Character Height	Illuminated Color	Buss Polarity*	Pins/ Leads	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Decimal Point #	Pricing 1	10	100	1000
173833CP	HP5082-7300	—	.290"	Red	4x7 Numeric	8	5.0 @ 170	.03 @ 20	660	RHDP	$7.95	$6.39	$4.79	$3.39
32951CP	TIL311	37161	.300"	Red	4x7 Hex character	11	5.0 @ 5	0.1 @ 5	660	—	16.95	14.35	12.92	11.62
118906CP	LTP747R	37161	.680"	Orange Red	5 x 7 AC/CR	12	1.7 @ 20	0.2 @ 20	655	—	1.95	1.55	1.17	.82
206560CP	LTP2157AG	—	2.0"	Green	5 x 7 CC/AR	14	3.7 @ 80	4.8 @ 80	565	—	4.95	4.49	3.95	3.59
183265CP	LMD5821ASR-20	—	2.3"	Red	5 x 8 CC/AR	14	1.7 @ 20	12 @ 20	660	—	4.95	4.49	3.95	3.49

* CA-Common Anode/CC-Common Cathode/AC-Anode Column/CR-Cathode Row/AR-Anode Row   # LHDP-Left Hand Decimal Point / RHDP-Right Hand Decimal Point

Cluster-Type T1¾ LED Lamps

- Cluster-type red/green T1¾ LEDs
- 660nm for red/570nm for green
- Lens: water clear   • Common anode   • 3 lead wires

150914CP: 50 Cluster (30 green/20 red)

150922CP: 14 Cluster (8 green/6 red)

150914CP

Part No.	Product No.	Vf @ If	mcd @ mA	Lead Wire	Mounting Hole Dia.	Dimensions (Dia." x L")	Pricing 1	10	100
150922CP	LCR2614B-79	10V @ 20mA	1950 @ 20	7"	M3	1.02 x 1.51	$4.95	$4.49	$3.95
150914CP	LCR5250A-79	20.5V @ 40mA	12,000 @ 40	16"	M4	2.07 x 1.98	21.95	19.95	17.95

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Color Code Legend — New Sale Qty. Save

Diffused

Green Transparent

Water Clear

Diffused Rectangular

TEXAS INSTRUMENTS

National Semiconductor

LITEON

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Standard-Output LEDs

Call for OEM PRICING – we carry major manufacturers.

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Fig.	Emitting Color	Lens/Feature Description	LED Size	Diameter inch/mm	Dimensions (Inches) A	B	C	D	Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing 1	10	100	1000
206480CP	LVY2041	1	Yellow	Yellow transparent	T1	.119/3	0.17	0.69	0.76	0.03	0.08	2.3 @ 20	375 @ 20	595	✳	$.15	$.12	$.09
136493CP	LT0333-41	1	Yellow	Water clear (BY209)	T1	.119/3	0.20	0.95	1.00	0.04	0.10	2.1 @ 20	19 @ 20	585	✳	.19	.11	.09
202489CP	MVL-301Y	1	Yellow	Yellow diffused	T1	.119/3	0.14	1.12	1.17	0.04	0.10	2.1 @ 20	9.0 @ 10	585	✳	.19	.15	.12
34657CP	LY2040	1	Yellow	Yellow diffused (XC209Y)	T1	.119/3	0.16	0.68	0.76	0.04	0.08	2.8 @ 20	6.5 @ 10	585	✳	.17	.13	.10
206498CP	LRY2041	1	Red	Red transparent	T1	.119/3	0.17	0.69	0.76	0.03	0.08	2.1 @ 20	280 @ 20	660	✳	.15	.12	.09
114673CP	LH2043	1	Red	Water clear (BR209)	T1	.119/3	0.14	0.98	1.05	0.03	0.07	2.8 @ 20	15 @ 15	697	✳	.19	.15	.12
94529CP	LH2040	1	Red	Red diffused (XC209RB)	T1	.119/3	0.18	1.04	1.13	0.03	0.07	2.0 @ 20	2.7 @ 20	700	✳	.19	.15	.12
175679CP	LTL-232	1	Green	Green transparent	T1	.119/3	0.17	0.69	0.76	0.03	0.08	2.2 @ 20	170 @ 20	565	✳	.15	.12	.09
114681CP	LVG2043	1	Green	Water clear (BG209)	T1	.119/3	0.14	0.98	1.05	0.03	0.07	2.8 @ 20	22 @ 2	563	✳	.19	.15	.12
34606CP	LSG2040	1	Green	Green diffused (XC209G)	T1	.119/3	0.13	1.05	1.10	0.03	0.08	2.8 @ 20	15 @ 10	560	✳	.15	.11	.08
202471CP	MVL-301HR	1	Orng Red	Red diffused	T1	.119/3	0.14	1.12	1.17	0.04	0.10	2.0 @ 20	9.0 @ 10	640	✳	.19	.15	.12
34622CP	LR2040	1	Orng Red	Red diffused (XC209R)	T1	.119/3	0.14	1.09	1.14	0.04	0.09	2.0 @ 20	1.5 @ 10	655	✳	.15	.13	.095
94553CP	LHG2062	1	Red/Green	White diff. bi-color/bi-state[1]	T1	.119/3	0.18	1.06	1.12	0.03	0.08	2.8 @ 20	3 & 15 @ 10	697/565	✳	.22	.19	.15
137411CP	LVB2040	1	Blue	Blue diffused	T1	.119/3	0.21	0.98	1.03	0.04	0.10	5.5 @ 20	7.0 @ 20	430	2.49	2.25	1.95	1.69
123941CP	521-9478	1	Green/Yel	White diff. bi-color/bi-state[1]	T1	.119/3	0.18	0.86	0.93	0.03	0.08	2.6 @ 10	5.0 @ 10	565/585	✳	.29	.19	.15
203553CP	HLMP-4100	1	Orng Red	Water clear	T1 3/4	.197/5	0.33	1.07	1.13	0.03	0.08	1.8 @ 20	750 @ 20	637	.29	.23	.17	.12
210825CP	BVU-5MIQN1	1	Orng Red	Red diffused	T1 3/4	.197/5	0.30	1.07	1.12	0.04	0.08	2.1 @ 20	600 @ 20	615	.49	.45	.39	.35
135597CP	LTL307E	1	Orng Red	Red diffused	T1 3/4	.197/5	0.34	1.00	1.05	0.03	0.07	2.8 @ 20	19 @ 10	635	✳	.19	.15	.12
107393CP	LE3330	1	Orng Red	Orange diffused (XC556A)	T1 3/4	.197/5	0.30	1.02	1.08	0.04	0.08	2.8 @ 20	12 @ 10	635	✳	.17	.13	.10
34796CP	LR3330	1	Orng Red	Red diffused (XC556R)	T1 3/4	.197/5	0.30	0.62	0.68	0.04	0.08	2.0 @ 20	1.5 @ 10	655	✳	.15	.12	.08
206501CP	LVY3331	1	Yellow	Yellow transparent	T1 3/4	.197/5	0.24	1.07	1.14	0.05	0.07	2.3 @ 20	725 @ 20	595	✳	.19	.15	.12
175695CP	LTL-425B	1	Yellow	Water clear	T1 3/4	.197/5	0.30	1.07	1.15	0.04	0.08	2.2 @ 20	550 @ 20	595	✳	.19	.15	.12
34825CP	LY3330	1	Yellow	Yellow diffused (XC556Y)	T1 3/4	.197/5	0.30	0.82	0.84	0.03	0.07	2.8 @ 20	15 @ 10	585	✳	.19	.15	.12
206519CP	LHR3331	1	Red	Red transparent	T1 3/4	.197/5	0.24	1.07	1.14	0.05	0.07	2.0 @ 20	725 @ 20	660	✳	.19	.15	.12
11797CP	HPQLMPD141	1	Red	Water clear (BR5704)	T1 3/4	.197/5	0.29	1.05	1.11	0.03	0.07	2.0 @ 20	350 @ 20	660	✳	.19	.13	.10
138860CP	LFH3363	1	Red	Water clear/flashing[†]	T1 3/4	.197/5	0.35	1.06	1.15	0.04	0.10	3-15 @ 20	7.5 @ 20	697	.49	.45	.39	.29
34745CP	LH3333	1	Red	Water clear (XC554R)	T1 3/4	.197/5	0.30	1.00	1.12	0.04	0.08	2.8 @ 20	7.5 @ 10	697	✳	.15	.11	.065
94511CP	LH3330	1	Red	Red diffused (XC556RB)	T1 3/4	.197/5	0.31	0.81	0.86	0.04	0.08	2.8 @ 10	4.0 @ 10	697	✳	.17	.13	.10
34690CP	LFH3360	1	Red	Red diff./flashing (XC5410)	T1 3/4	.197/5	0.30	0.94	0.98	0.04	0.07	1.2 @ 20	2.8 @ 20	697	.49	.45	.39	.35
134332CP	LT18B3-81UR	1	Blue	Water clear	T1 3/4	.197/5	0.30	0.93	1.00	0.04	0.10	5.0 @ 20	630 @ 20	428	2.65	2.45	2.25	1.95
137613CP	LSB3333	1	Blue	Water clear	T1 3/4	.197/5	0.34	0.98	1.03	0.03	0.08	5.5 @ 20	190 @ 20	430	2.49	2.25	1.95	1.75
138691CP	LVB3330	1	Blue	Blue diffused	T1 3/4	.197/5	0.34	0.98	1.03	0.06	0.08	5.5 @ 20	10 @ 20	430	2.49	2.25	1.95	1.75
153154CP	LVG3333	1	Green	Water clear	T1 3/4	.197/5	0.36	0.90	0.95	—	0.10	2.2 @ 20	300 @ 20	568	✳	.19	.15	.12
11359CP	LG3333	1	Green	Water clear (BG5704)	T1 3/4	.197/5	0.30	1.04	1.12	0.04	0.07	2.1 @ 20	40 @ 20	555	✳	.19	.17	.14
175687CP	LT0524-81	1	Green	Green transparent	T1 3/4	.197/5	0.24	1.07	1.14	0.04	0.07	2.0 @ 20	40 @ 20	555	✳	.18	.15	.09
94561CP	LFG3360	1	Green	Green diff./flashing (XC5408)	T1 3/4	.197/5	0.30	1.05	1.11	0.04	0.08	1.2 @ 20	17 @ 20	565	.59	.53	.48	.43
34761CP	LG3330	1	Green	Green diffused (XC556G)	T1 3/4	.197/5	0.31	0.79	0.88	0.04	0.09	2.8 @ 20	12 @ 10	565	✳	.15	.14	.10
34711CP	LEG3362	1	Red/Green	White diff. bi-color/bi-state[1]	T1 3/4	.197/5	0.30	1.01	1.06	0.04	0.09	2.8 @ 20	7.5 & 8 @ 20	635/565	.35	.29	.25	.19
119634CP	LHR3930	1	Red	Red diffused Jumbo	T2 1/2	.315/8	0.44	0.84	1.00	—	0.07	2.4 @ 20	100 @ 20	660	.25	.21	.15	.14
137621CP	LVG3930	1	Green	Green diffused Jumbo	T2 1/2	.315/8	0.43	1.04	1.09	0.07	0.07	1.7 @ 20	40 @ 20	565	.25	.21	.15	.13
138683CP	LHR3630	1	Red	Red diff. XJumbo (XC10R)	T3 1/4	.394/10	0.40	1.04	1.08	0.07	0.10	1.5 @ 20	200 @ 20	660	.29	.26	.22	.18
98984CP	LVG3630	1	Green	Green diff. XJumbo (XC10G)	T3 1/4	.394/10	0.40	1.07	1.17	0.12	0.08	2.8 @ 20	40 @ 20	565	.28	.25	.19	.14
98992CP	LY3630	1	Yellow	Yellow diff. XJumbo (XC10Y)	T3 1/4	.394/10	0.54	1.04	1.11	0.08	0.08	2.1 @ 20	8.0 @ 20	585	.29	.25	.19	.15
136274CP	LA44B/2G	2	Green	Green diffused (dual)	T1	.119/3	0.38	0.17	0.36	0.60	0.10	2.3 @ 20	20 @ 10	565	.35	.29	.25	.19
136282CP	LA44B/2I	2	Red	Red diffused (dual)	T1	.119/3	0.38	0.17	0.36	0.60	0.10	2.3 @ 20	6.2 @ 10	630	.35	.29	.25	.19
206375CP	LA129B/2LG	2	Green	Green diffused (dual)	T1 3/4	.197/5	0.39	0.18	0.39	0.10	0.10	2.3 @ 20	12 @ 10	565	.49	.45	.39	.29
206383CP	LA129B/2LR	2	Red	Red diffused (dual)	T1 3/4	.197/5	0.39	0.18	0.39	0.60	0.10	2.3 @ 20	3.5 @ 10	697	.49	.45	.39	.29
26745CP	MV50	3	Red	Water clear	T 3/4	.083/2.1	0.06	0.25	0.25	—	0.11	1.7 @ 20	1.4 @ 20	660	.39	.32	.25	.19
134869CP	RRL5621	3	Orng Red	Red diffused (5V)[†]	T 3/4	.083/2.1	0.09	0.37	0.65	—	0.10	5.0 @ 8	1.2 @ 8	650	✳	.19	.15	.12
104248CP	LA93B/H-1	4	Red	Red diffused (XC410R)	T1 3/4	.197/5	0.35	0.89	0.95	0.23	0.08	2.8 @ 20	6.5 @ 10	697	✳	.23	.19	.17
104256CP	LA93B/G-1	4	Green	Green diffused (XC410G)	T1 3/4	.197/5	0.35	0.89	0.95	0.23	0.08	2.2 @ 20	6.0 @ 10	570	✳	.23	.19	.17
104264CP	LA93B/Y-1	4	Yellow	Yellow diffused (XC410Y)	T1 3/4	.197/5	0.35	0.89	0.95	0.23	0.08	2.8 @ 20	2.5 @ 10	585	.35	.29	.25	.19
34673CP	LHG3392	5	Red/Green	White diff. bi-color/tri-state[1]	T1 3/4	.197/5	0.30	1.02	1.05	1.12	0.03	2.8 @ 20	3 & 12 @ 10	697/565	.29	.25	.19	.15
34850CP	LT7341R-81✳	6	Orng Red	Red diffused rectangular	3.5 x 6	—	0.27	0.85	0.93	—	0.07	2.0 @ 20	10.1 @ 20	635	.39	.35	.31	.24
94545CP	LG25030✳	6	Green	Green diff. rect. (XC57124G)	3.5 x 6	—	0.26	1.06	1.11	—	0.08	2.2 @ 20	5.0 @ 20	565	.39	.31	.23	.16
104889CP	LEG5292✳	7	Red/Green	White diff. bi-color rect.	2 x 5	—	0.27	1.02	1.05	1.13	0.08	2.2 @ 20	3.5/6 @ 10	695/570	✳	.17	.13	.10
176532CP	MV50G	8	Green	Water clear	T 3/4	.069/1.7	0.06	0.40	0.40	0.05	0.08	2.1 @ 20	300 @ 20	568	✳	.10	.08	.06

[1] Reverse polarity to change color   [†] Has internal current limiting resistor   [*] For Mounting Hardware see page 92

JAMECO

High-Output LEDs

SALE
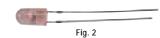
• Typical DC forward current 20mA

See page 92 for LED Mounting Hardware
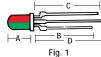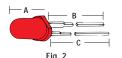
Fig. 1

Fig. 2

Part No.	Mfr. Cross Reference No.	Fig.	Emitting Color	Lens/Feature Description	LED Size	Diameter inch/mm	Dimensions (Inches)				Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing			
							A	B	C	D					1	10	100	1000
142885CP	CLP1309-U	1	White	Water clear	T1	.119/3	0.22	0.84	0.90	0.04	0.08	3.6 @ 20	2300 @ 20	—	$2.89	$2.75	$2.59	$2.45
142893CP	CLP1509	1	White	Water clear	T1 3/4	.197/5	0.34	0.79	0.88	0.04	0.08	3.6 @ 20	3700 @ 20	—	3.95	3.59	2.95	2.75
183231CP	T18W133196	1	White	Water clear	T1 3/4	.197/5	0.30	1.06	1.12	0.04	0.08	3.6 @ 20	3000 @ 20	—	2.95	2.65	2.39	2.15
197624CP	BVU5E1BA4	1	Blue	Water clear	T1 3/4	.197/5	0.29	1.06	1.12	0.04	0.08	3.5 @ 20	10000 @ 20	470	3.19	2.89	2.59	2.29
183222CP	MCDL513SBC4	1	Blue	Water clear	T1 3/4	.197/5	0.29	1.02	1.13	0.04	0.08	5.0 @ 20	3000 @ 20	470	3.25	2.95	2.65	2.39
183214CP	MCDPG503PCI	1	Green	Water clear	T1 3/4	.197/5	0.30	1.04	1.09	0.04	0.08	3.5 @ 20	2200 @ 20	515	2.95	2.65	2.39	2.15
131895CP	TLSH180P	1	Orange	Water clear	T1 3/4	.197/5	0.39	0.80	0.86	0.06	0.10	2.1 @ 20	7000 @ 20	623	2.49	2.19	1.95	1.79
153138CP	LT2KJ3-UR-S14	1	Orange	Water clear	T1 3/4	.197/5	0.36	0.90	0.95	—	0.08	2.1 @ 20	2500 @ 20	621	.39	.35	.29	.25
197683CP	BVT5E1QT4ER	1	Orange-Red	Water clear	T1 3/4	.197/5	0.29	1.08	1.11	0.04	0.08	2.3 @ 20	4650 @ 20	634	.69	.59	.49	.39
197616CP	BVU5E1QH4E	1	Red	Water clear	T1 3/4	.197/5	0.30	1.05	1.10	0.07	0.08	1.8 @ 20	2180 @ 20	630	.39	.35	.29	.25
215597CP	LT2K33-81-UC9T	1	Yellow	Water clear	T1 3/4	.197/5	0.31	0.89	0.95	0.04	0.10	2.2 @ 20	5000 @ 20	590	.59	.55	.49	.45
197675CP	BVT5E1TT4E	1	Yellow	Water clear	T1 3/4	.197/5	0.30	1.08	1.13	0.04	0.08	2.3 @ 20	2800 @ 20	592	.69	.62	.55	.49
197641CP	BVT529T13E	2	Yellow	Yellow transpt.	Oval	.170/.220	0.29	1.04	1.09	—	0.08	2.3 @ 20	7800 @ 20	590	.69	.62	.55	.49
197659CP	BVT529QT3F	2	Orange-Red	Red transpt.	Oval	.170/.220	0.30	1.05	1.11	—	0.08	2.3 @ 20	3600 @ 20	629	.69	.62	.55	.49

LEDTECH LEDs

• Typical DC forward current 20mA

Ledtech is a QS9000 and ISO-9000 Certified Company
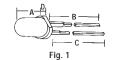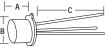
Fig. 1

Fig. 2

152864CP

151415CP

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Product Number	Fig.	Emitting Color	Lens/Feature Description	LED Size	Dia. (in./mm)	Dimensions (Inches)				Lead Spacing	Typical Vf @ If (mA)	Typical mcd @ mA	Wavelength nm	Pricing			
							A	B	C	D					1	10	100	1000
156970CP	LT1873-UR-C07	2	Red Ultra Brt.	Water clear (wide angle)	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.9 @ 20	2112 @ 20	660	$.35	$.31	$.25	$.19
152805CP	LT1873-81-UR	2	Red Ultra Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.9 @ 20	600 @ 20	660	.29	.25	.19	.15
152864CP	LT1873-81	2	Red Super Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	1.7 @ 20	1000 @ 20	660	.29	.24	.19	.15
156953CP	LT0373-41	2	Red Super Brt.	Water clear	T1	.119/3	0.21	1.07	1.14	—	0.08	1.7 @ 20	600 @ 20	660	.25	.19	.15	.12
156945CP	LT0362-25-D61	1	Red/Green	White diff. bi-color tri-state	T1	.119/3	0.16	0.87	0.94	1.0	0.08	2.1 @ 20	14/3 @ 20	700/567	.29	.25	.19	.15
152750CP	LT0344R-41	2	Orange Red	Red clear	T1	.119/3	0.20	0.89	0.95	—	0.08	2.1 @ 20	23.5 @ 10	635	✳	.19	.16	.12
152784CP	LT0341R-41	2	Orange Red	Red diffused	T1	.119/3	0.20	0.89	0.95	—	0.08	2.1 @ 20	6.9 @ 10	635	✳	.17	.15	.12
152856CP	LT1841R-81	2	Orange Red	Red diffused	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.1 @ 20	23 @ 20	635	✳	.17	.15	.13
152768CP	LT0324-41	2	Green	Green clear	T1	.119/3	0.20	0.89	0.95	—	0.10	2.1 @ 20	20 @ 20	567	✳	.17	.14	.11
156929CP	LT0321-41-HE	2	Green	Green diffused	T1	.118/3	0.16	0.88	0.94	—	0.10	2.1 @ 20	13.3 @ 20	567	✳	.18	.11	.10
156961CP	LT1823-81-HE	2	Green	Water clear	T1 3/4	.197/5	0.34	0.87	0.97	—	0.10	2.2 @ 20	500 @ 20	567	✳	.19	.17	.14
152821CP	LT1821-81-HE	2	Green	Green diffused	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.2 @ 20	100 @ 20	567	✳	.17	.11	.09
152792CP	LT1833-81M1	2	Ylw Super Brt.	Water clear	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.1 @ 20	420 @ 20	595	.29	.25	.19	.15
152830CP	LT1831-81UR	2	Ylw Ultra Brt.	Yellow diffused	T1 3/4	.197/5	0.34	0.89	0.95	—	0.10	2.1 @ 20	400 @ 20	595	.39	.35	.29	.25
156937CP	LT0331-41	2	Yellow	Yellow diffused	T1	.118/3	0.16	0.88	0.94	—	0.10	2.1 @ 20	11 @ 20	585	✳	.17	.14	.11
White Diffused Backlight																		
151415CP	LTIF24-A2-S1	–	Green	Backlight, white diffused		2.05"L x 0.78"H x 0.09"T					8-pin	6.0 @ 20	6.0 @ 20	567	$2.95	$2.65	$2.39	$1.95

Infrared and Visible Light Emitters and Detectors
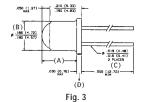
• Use for remote control and/or for fiber optics
• **P/N 133946CP:**
  Can be used with cameras, see pgs 182-183 (peak emission wavelength: 940nm @ If 20mA)

Fig. 1

Fig. 2

Fig. 3

SALE

106526CP

172321CP

Part No.	Mfr. Cross Ref. No.	Fig.	Description	Size	Diameter inch/mm	Dimensions (inches)				Vf @ If	nm	mWatts	Pricing			
						A	B	C	D				1	10	100	1000
112150CP	TLN100	1	Infrared emitter diode (GaAs)	T1	0.125/3	0.18	0.95	0.98	0.03	1.2V @ 20mA	940	1.2	$.24	$.19	$.14	$.12
133946CP	SLI-0308CP	1	Infrared emitter diode (GaAs)	T1	0.12/3	0.22	0.98	1.00	0.03	1.7V @ 50mA	940	200	.69	.59	.45	.35
112176CP	IRD300	1	Infrared detector	T1	0.12/3	0.18	0.95	0.98	0.03	—	940	—	.39	.29	.19	.15
106526CP	TLN110	1	Infrared emitter diode (GaAs)	T1 3/4	0.200/5	0.34	0.78	0.84	0.04	1.2V @ 20mA	940	9	.39	.29	.19	.15
112168CP	IRD500	1	Infrared detector	T1 3/4	0.200/5	0.31	1.05	1.10	0.04	—	940	—	.39	.36	.28	.23
120221CP	BPW77	2	Visible light detector	TO-18	—	0.24	0.19	0.52	—	—	800	—	1.95	1.75	1.49	1.25
172321CP	OP133	3	Infrared emitter diode (GaAs)	TO-46	—	0.22	0.18	1.05	0.20	1.8V @ 100mA	935	5	2.25	1.95	1.75	1.49

Color Code Legend

New Sale Qty. Save Closeout

Color Code Legend
New Sale Qty. Save

LED Mounting Hardware

- P/N 95521CP: for use with P/N 94545CP and 34850CP, pg 90

95513CP **23077CP** **95521CP**

SALE

Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Description	Color	Mounting Hole Dia.	Panel Thickness	10	100	1000
95513CP	LMH100	T1 snap-in	Black	.185"	Up to .070"	$.08	$.07	$.04
23077CP	LMH200	T1¾ ring & clip	Black	.257"	Up to .125"	.15	.135	.12
95521CP	LMH250	Rect. snap-in	Black	.306" x .202"	Up to .092"	.20	.18	.16

T1¾ Cliplite® LED Lens Mount

- Requires no assembly tools, just snap in
- Material: lens – polycarbonate; spacer – nylon
- Increases viewing angle to 180°
- Devices mount on .375" centers
- Helps guard against electrostatic discharge up to 16kV while affording the LED physical protection

29612CP **Fig. 1 (5mm)** **Fig. 2 (5mm)**

Part No.	Product No.	Description	Color	Fig.	Mounting Hole Dia.	Panel Thickness	1	10	100	1000
14277CP	CLF280CTP	T1¾	Clear	1	.25"	.063" –.125"	$.24	$.21	$.18	$.15
29612CP	CLF280RTP	T1¾	Red	1	.25"	.063" –.125"	.25	.22	.19	.17
124927CP	CLB300CTP	T1¾	Clear	2	.25"	.031" – .25"	.24	.21	.18	.15

T1 & T1¾ Cliplite® Lens and Conxrite® Cable Assembly

Cliplite® Lens: • Material: (lens) polycarbonate: (ring) polyproplyene (UL Listed)
• Mounts through front panel in 0.171" hole diameter, panel thickness: 1/32" to 3/32"
Conxrite® Cable Assembly: • Terminals: phosphor bronze, tin-plated
• Connector socket and ring/header connector: thermoplastic (UL Listed)
• Wire: 22AWG, 7 strand copper, insulated

SALE

Part No.	Product No.	Size	Description	1	10	100	1000
143183CP	SMC170CTP	T1	Clear Cliplite® lens	$.25	$.20	$.15	$.10
143132CP	CMC321CTP	T1¾	Clear Cliplite® lens	.25	.22	.19	.16
143087CP	BE2108	T1	8.5" cable assembly	1.25	1.13	.93	.86
143036CP	CE2108	T1¾	8.5" cable assembly	1.24	1.15	1.07	1.05
143052CP	CE2118	T1¾	18" cable assembly	1.75	1.59	1.39	1.25

LED Panel Mount Indicators

- Easy panel installation
- Panel/status/ instrument indicators
- Vf @ If: 2V @ 20mA
- Color: red
- Chrome housing

141111CP **141129CP/141137CP**

Part No.	Mfr. Cross Ref. No.	LED Size	Dimensions (in.) L	A	B	Mounting Hole	1	10	100	1000
141111CP	L922SRD	T1	.56	.34	.25	.23"	$.79	$.65	$.55	$.45
141129CP	L913RD	T1	.56	.39	.32	.24"	1.09	.85	.79	.69
141137CP	L917RD	T1 ¾	.70	.55	.47	.31"	.89	.79	.71	.55

JKL Single-Lead Tipless-Type Fluorescent Lamps

World's smallest fluorescent and ultra violet lamps. Assure you of bright, uniform output, long-life, cool operation and unmatched reliability.

142244CP

146165CP

142244CP: Compatible with P/N 146190CP (below)
- Lamp current: 5.0mArms
- Starting voltage: 390Vrms
- Lamp voltage: 170Vrms • Intensity: 3500cd/m²
146165CP: Compatible with P/N 142252CP (below)
- Lamp current: 5.0mArms
- Starting voltage: 1200Vrms
- Lamp voltage: 520Vrms • Intensity: 28,000cd/m²

Part No.	Size (Ins.)	1	10	25
142244CP	2.0"L x 0.25"Dia.	$13.95	$12.49	$10.95
146165CP	10.0"L x 0.12"Dia.	13.95	12.49	10.95

JKL Fluorescent Lamp Power Supplies

These DC inverters are designed especially for cold cathode fluorescent lamps.

146190CP:
- Output voltage: 600Vrms @ 4mA, 30kHz
- Input voltage: 5VDC @ 200mA
- PCB size: 1.7"L x 0.8"W x 0.04"H

146190CP

142252CP:
- Output voltage: 850Vrms @ 5.5mA, 20kHz
- Input voltage: 12VDC @ 260mA
- PCB size: 1.8"L x 0.8"W x 0.04"H

142252CP

Part No.	Product No.	1	10	25
146190CP	65010	$14.95	$13.45	$11.99
142252CP	12200	15.95	14.49	12.95

Order Anytime 24x7x365

Incandescent Panel Mount Lamps

- 215781CP/215790CP/215773CP: wire length - 3.9" (100mm)
- 215749CP/215757CP/215765CP: wire length - 4.9" (125mm)
- 215714CP/215722CP/215731CP: solder terminals - 0.196" (5mm)

215790CP **Fig. 1**
215757CP **Fig. 2**
215714CP **Fig. 3**

Part No.	Product No.	Fig.	Volts	Color	Mounting Hole	1	10	100
215773CP	R9-46B-W100-12V-R	1	12	Red	1/2" (13mm)	$1.79	$1.59	$1.35
215781CP	R9-46B-W100-12V-Y	1	12	Yellow	1/2" (13mm)	1.79	1.59	1.35
215790CP	R9-46B-W100-12V-G	1	12	Green	1/2" (13mm)	1.79	1.59	1.35
215749CP	R9-55B-W130-12V-R	2	12	Red	9/32" (7mm)	1.79	1.59	1.35
215757CP	R9-55B-W130-12V-Y	2	12	Yellow	9/32" (7mm)	1.79	1.59	1.35
215765CP	R9-55B-W130-12V-G	2	12	Green	9/32" (7mm)	1.79	1.59	1.35
215714CP	R9-71B-05-12V-R	3	12	Red	5/8" (16mm)	1.79	1.59	1.35
215722CP	R9-71B-05-12V-Y	3	12	Yellow	5/8" (16mm)	1.79	1.59	1.35
215731CP	R9-71B-05-12V-G	3	12	Green	5/8" (16mm)	1.79	1.59	1.35

Neon Panel Mount Lamps

- Output voltage: 120V
- Mounting hole diameter: 5/8" (16mm)
- Solder terminals: 0.196" (5mm)

215802CP: Red
215811CP: Yellow
215829CP: Green

215802CP

Part No.	Product No.	1	10	100
215802CP	R9-7IN-05-120V-R ..	$1.79	$1.59	$1.35
215811CP	R9-7IN-05-120V-Y	1.79	1.59	1.35
215829CP	R9-7IN-05-120V-G	1.79	1.59	1.35

We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

It's that simple!

Fig. 1 · Fig. 2 · Fig. 3 · Fig. 4 · Fig. 5 · Fig. 6 · Fig. 7 · Fig. 8 · Fig. 9 · Fig. 10 · Fig. 11 · Fig. 12

Fig. 13 · Fig. 14 · Fig. 15 · Fig. 16 · Fig. 17 · Fig. 18 · Fig. 19 · Fig. 20 · Fig. 21 · Fig. 22 · Fig. 23

Incandescent Lamps
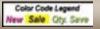
Part No.	Mfr. Cross Ref. No.	Fig.	Description	Volts (VDC)	Current (A)	MSCP	Pricing 1	Pricing 10	Pricing 100
209381CP	13	1	G3 1/2 miniature screw	3.7	.30	.98	$.81	$.73	$.65
209390CP	14	1	G3 1/2 miniature screw	2.47	.30	.50	.55	.50	.45
209402CP	40	2	T3 1/4 miniature screw	6.3	.15	.50	.29	.19	.15
209411CP	44	3	T3 1/4 miniature bayonet	6.3	.25	.90	.29	.20	.15
209429CP	46	2	T3 1/4 miniature screw	6.3	.25	.90	.37	.32	.27
209437CP	47	3	T3 1/4 miniature bayonet	6.3	.15	.50	.29	.20	.15
209445CP	50	1	G3 1/2 miniature screw	7.5	.22	1.0	.64	.57	.51
210403CP	51	4	G3 1/2 miniature bayonet	7.5	.22	1.0	.48	.33	.28
209453CP	53	4	G3 1/2 miniature bayonet	14.4	.12	1.0	.50	.41	.35
210411CP	55	5	G4 1/2 miniature bayonet	7.0	.41	2.0	.29	.15	.10
209461CP	73	6	T1 3/4 wedge	14.0	.08	.30	.29	.21	.17
209470CP	85	6	T1 3/4 wedge	28.0	.04	.30	.29	.21	.17
209488CP	86	6	T1 3/4 wedge	6.3	.20	.40	.29	.21	.17
209496CP	93	7	S-8 sngl contact bayonet	12.8	1.04	15.0	.75	.63	.57
209509CP	161	8	T3 1/4 wedge	14.0	.19	1.0	.29	.21	.19
209517CP	168	8	T3 1/4 wedge	14.0	.35	3.0	.29	.22	.17
209525CP	194	8	T3 1/4 wedge	14.0	.27	2.0	.29	.22	.17
209533CP	222	9	GTL-3 miniature screw	2.25	.25	—	.29	.26	.23
209541CP	259	8	T3 1/4 wedge	6.3	.25	.65	.29	.23	.18
209550CP	313	3	T3 1/4 miniature bayonet	28.0	.17	3.5	.29	.25	.19
209568CP	327	10	T1 3/4 midget flange	28.0	.04	.34	.35	.30	.25
209576CP	328	10	T1 3/4 midget flange	6.0	.20	.60	.55	.47	.35
209584CP	330	10	T1 3/4 midget flange	14.0	.08	.50	.41	.36	.31
209592CP	334	11	T1 3/4 midget groove	28.0	.04	.34	.49	.40	.33
209605CP	335	12	T1 3/4 midget screw	28.0	.04	.34	.59	.48	.36
209613CP	344	10	T1 3/4 midget flange	10.0	.014	.002	.99	.89	.79
209621CP	345	10	T1 3/4 midget flange	6.0	.04	.03	.79	.64	.46
209630CP	370	10	T1 3/4 midget flange	18.0	.04	.15	.99	.89	.79
209648CP	376	10	T1 3/4 midget flange	28.0	.06	.34	.69	.59	.49
209656CP	379	11	T1 3/4 midget groove	6.3	.20	.40	.99	.89	.74
209664CP	381	10	T1 3/4 midget flange	6.3	.20	.40	.59	.44	.34
209672CP	382	10	T1 3/4 midget flange	14.0	.08	.30	.49	.40	.34
209681CP	385	10	T1 3/4 midget flange	28.0	.04	.15	.49	.41	.34
209699CP	386	11	T1 3/4 midget groove	14.0	.08	.30	.49	.35	.30
209701CP	387	10	T1 3/4 midget flange	28.0	.04	.30	.39	.27	.26
209710CP	388	11	T1 3/4 midget groove	28.0	.04	.30	.49	.32	.28
209728CP	394	10	T1 3/4 midget flange	12.0	.04	.12	.49	.44	.38
209736CP	656	8	T3 1/4 wedge	28.0	.06	.62	.29	.21	.17
209752CP	657	8	T3 1/4 wedge	28.0	.08	.62	.29	.23	.18
202100CP	683	12	T1 wire terminal	5.0	.06	.05	.49	.35	.26
209761CP	685	13	T1 sub midget flange	5.0	.06	.05	1.59	1.39	1.19
209779CP	715	12	T1 wire terminal	5.0	.115	.15	.99	.89	.79
209787CP	755	3	T3 1/4 miniature bayonet	6.3	.15	.33	.59	.47	.35
209795CP	756	3	T3 1/4 miniature bayonet	14.0	.08	.31	.79	.65	.49
209808CP	757	3	T3 1/4 miniature bayonet	28.0	.08	.62	.49	.38	.33
210438CP	1156	7	S-8 sngl contact bayonet	12.8	2.1	32	.39	.28	.21
210446CP	1157	14	S-8 double contact index	12.8/14	21/.59	32/3	.49	.38	.33
209816CP	1450	4	G3 1/2 miniature bayonet	24.0	.035	.23	.99	.89	.79
209824CP	1813	3	T3 1/4 miniature bayonet	14.4	.10	.86	.35	.34	.23
209832CP	1815	3	T3 1/4 miniature bayonet	14.0	.20	1.4	.49	.41	.30
209841CP	1816	3	T3 1/4 miniature bayonet	13.0	.33	3.0	.35	.26	.21
209859CP	1818	3	T3 1/4 miniature bayonet	24.0	.17	3.3	.99	.89	.79
209867CP	1819	3	T3 1/4 miniature bayonet	28.0	.04	.34	.29	.25	.19
209875CP	1820	3	T3 1/4 miniature bayonet	28.0	.10	1.6	.49	.36	.27
209883CP	1821	15	T3 1/4 screw	28.0	.17	3.4	.99	.89	.79
209891CP	1822	3	T3 1/4 miniature bayonet	36.0	.10	2.1	.49	.36	.34
209904CP	1829	3	T3 1/4 miniature bayonet	28.0	.07	1.0	.30	.26	.22

Incandescent Lamps (Continued)

Part No.	Mfr. Cross Ref. No.	Fig.	Description	Volts (VDC)	Current (A)	MSCP	Pricing 1	Pricing 10	Pricing 100
209912CP	1835	3	T3 1/4 miniature bayonet	55.0	.05	1.1	$.49	$.43	$.41
209921CP	1847	3	T3 1/4 miniature bayonet	6.3	.15	.38	.69	.62	.56
209939CP	1850	3	T3 1/4 miniature bayonet	5.0	.09	.25	.69	.59	.49
209947CP	1864	3	T3 1/4 miniature bayonet	28.0	.17	3.0	.79	.67	.59
209955CP	1866	3	T3 1/4 miniature bayonet	6.3	.25	.65	.39	.32	.29
209963CP	1891	3	T3 1/4 miniature bayonet	14.0	.24	2.0	.49	.35	.30
209971CP	1893	3	T3 1/4 miniature bayonet	14.0	.33	2.0	.59	.49	.43
141073CP	2182	16	T1 3/4 wire terminal	14.0	.08	.30	.59	.53	.48
141065CP	2200	16	T1 3/4 wire terminal	5.0	.06	.05	.59	.53	.48
141057CP	6833	17	T 3/4 wire terminal	5.0	.06	.05	1.29	1.05	.77
209998CP	7219	12	T1 wire terminal	12.0		.15	.29	.26	.23
210008CP	7328	18	T1 3/4 bi-pin	6.0	.20	.60	.99	.89	.74
210016CP	7335	10	T1 3/4 midget flange	5.0	.115	.15	.89	.73	.69
210024CP	7341	10	T1 3/4 midget flange	28.0	.065	.65	.89	.73	.69
141006CP	7361	18	T1 3/4 bi-pin	5.0	.06	.05	1.29	1.15	.99
210032CP	7382	18	T1 3/4 bi-pin	14.0	.08	.30	.49	.39	.35
210041CP	7387	18	T1 3/4 bi-pin	28.0	.04	.30	.69	.54	.46
210059CP	7632	19	T1 1/4 bi-pin	28.0	.04	.32	1.59	1.35	1.19
210067CP	7683	20	T1 bi-pin	5.0	.06	.05	1.39	1.19	1.09
210075CP	7715	20	T1 bi-pin	5.0	.115	.15	1.39	1.29	1.19
210083CP	7839	20	T1 bi-pin	28.0	.024	.15	1.39	1.29	1.09
210227CP	6PSB	21	T2 tel. slide base type 5	6.0	.14	550	.89	.75	.59
210112CP	12ESB	21	T2 tel. slide base type 5	12.0	.04	650	.79	.64	.57
210121CP	12PSB	21	T2 tel. slide base type 5	12.0	.17	2000	.89	.75	.59
210139CP	24ESB	21	T2 tel. slide base type 5	24.0	.04	850	.79	.64	.57
210147CP	24MB	22	T2 miniature bayonet	24.0	.073	3000	1.29	1.09	.89
210155CP	24PSB	21	T2 tel. slide base type 5	24.0	.073	3000	.89	.65	.53
210163CP	28ESB	21	T2 tel. slide base type 5	28.0	.04	1500	.79	.64	.57
210171CP	28MB	22	T2 miniature bayonet	28.0	.04	1600	1.29	.99	.89
210180CP	28PSB	21	T2 tel. slide base type 5	28.0	.04	1600	.89	.75	.51
210198CP	48PSB	21	T2 tel. slide base type 5	48.0	.053	1800	.99	.89	.65
210201CP	60MB	22	T2 miniature bayonet	60.0	.05	2200	1.29	1.09	.99
210219CP	60PSB	21	T2 tel. slide base type 5	60.0	.05	2200	.89	.69	.59
210091CP	120MB	22	T2 miniature bayonet	120	.025	1200	.99	.69	.65
210104CP	120PSB	21	T2 tel. slide base type 5	120	.025	1200	.89	.74	.68
210340CP	PR2	23	B3 1/2 sngl cont. mini flange	2.38	.50	.80	.59	.49	.44
210358CP	PR3	23	B3 1/2 sngl cont. mini flange	3.57	.50	1.5	.59	.49	.44
210366CP	PR4	23	B3 1/2 sngl cont. mini flange	2.33	.27	.40	.59	.49	.44
210374CP	PR6	23	B3 1/2 sngl cont. mini flange	2.47	.30	.45	.59	.49	.44

Neon Lamps

Fig. 1 · Fig. 2 · Fig. 3 · Fig. 4

Part No.	Mfr. Cross Ref. No.	Fig.	Description	Voltage (VAC)	Current (mA)	Pricing 1	Pricing 10	Pricing 100
27351CP	A1A (NE-2)	1	Wire terminal	65-120	0.5	$.49	$.39	$.29
210243CP	A1B	1	Wire terminal	65-120	0.3	.39	.29	.27
210251CP	A1C	1	Wire terminal	65-120	1.2	.39	.32	.29
210260CP	A9A (NE-2E)	1	Wire terminal	65-120	0.7	.39	.28	.27
210278CP	B1A (NE-51)	2	T3 1/4 miniature bayonet	65-120	0.3	.89	.75	.69
210286CP	B2A (NE-51H)	2	T3 1/4 miniature bayonet	65-120	1.2	.89	.69	.49
210294CP	B7A (NE-45)	3	T4 1/2 candelabra screw	65-120	2.0	4.99	4.49	3.49
210307CP	B9A (NE-48)	4	T4 1/2 D.C. bayonet	65-120	2.0	4.99	4.49	3.99
210315CP	C2A (NE-2H)	1	Wire terminal	65-120	1.9	.39	.34	.29

Color Code Legend — New · Sale · Qty. Save

16 Characters x 2 Lines Serial LCD Module

- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping, and auto scroll feature
- Serial input at 1200–19,200bps (jumper selectable)
- Connect 16 modules using same 2 wire interface
- Backlight supply current: 40mA typical
- Power requirement: 5VDC @ 9mA (recommend P/N 164101CP, pg 51)
- Display size: 2.5"L x 0.7"W
- Weight: 0.6 lbs.
- Module size: 3.2"L x 1.5"W x 0.8"T

Includes: Manual and software
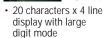
Part No.	Description	1	10	25
174166CP	16 x 2 w/ interface	$64.95	$58.49	$52.65

20 x 4 Serial LCD Modules

- 20 characters x 4 line display with large digit mode
- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping and auto scroll feature
- Backlight supply current: 90mA typical
- Serial input at 1200–19,200bps (jumper selectable)
- Connect 16 modules using the same 2 wire interface
- Display size: 3.0"L x 1.0"W
- One-year warranty

150957CP

157323CP

Includes: Manual and software

150957CP: 20 x 4 Serial LCD Module
- Power requirement: 5VDC @ 10mA typical (recommend P/N 164101CP, pg 51)
- Module size: 3.9"L x 2.4"W x 0.7"T
- Weight: 0.9 lbs.

157323CP: 20x4 Serial LCD Module with keypad Interface
- Power requirements: 5VDC @ 16mA typical (recommend P/N 164101CP, pg 51)
- Module size: 3.7"L x 2.4"W x 1.1"T
- Weight: 0.6 lbs.

SALE

Part No.	Description	1	10	25
150957CP	LCD module	$89.95	$80.95	$72.95
157323CP	Module w/ interface	99.95	89.99	82.95

20 Characters x 4 Lines Serial VFD Display

- Bar graphs, large digits, multiple displays, software contrast control, auto line wrapping and scroll feature
- Power off supply current: 9mA
- Serial input of 1200–19,200bps (jumper selectable)
- Display size: 2.8"L x .82"W
- Module size: 3.9"L x 2.4"W x 1.0"T

Requires: 5VDC @ 275mA typical (recommended P/N 164101CP, pg 51)

Includes: Manual and software

Part No.	Product No.	1	10	25
174158CP	VFD2041	$149.99	$139.99	$129.99

16 x 4 LCD Parallel Display

- 16 characters x 4 lines
- 5 x 8 dot matrix
- 4 or 8 bit parallel interface
- Clear/reflective type LCD display
- Control LSI HD4470 or equivalent & column driver MSM5259 or equivalent
- Display size: 2.4"L x 1.0"H
- Module size: 3.4"L x 2.4"W x 0.3"T

Power requirements: 5VDC @ 2mA max. (recommend P/N 164101CP, pg 51)
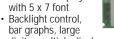
Part No.	Description	1	10	25
210761CP	16 x 4 LCD display	$22.95	$19.95	$18.69

Graphics LCD Serial Display

40 characters x 8 lines Maximum

- 40 characters x 8 lines max. display with 5 x 7 font
- Backlight control, bar graphs, large digits, multiple displays, software contrast control, auto line wrapping, and auto scroll feature
- Pixel layout: 240 x 64 pixels
- Serial input: 1200–19,200bps (jumper configurable)
- Backlight supply current: 160mA typical
- Power requirement: 5VDC @ 31mA typical (recommend P/N 164101CP, pg 51)
- Display size: 5.2"L x 1.5"W • Weight: 0.9 lbs.
- Module size: 7.1"L x 2.6"W x 0.7"T

Includes: Manual and software

Part No.	Description	1	10	25
174182CP	Graphics display	$189.95	$175.95	$159.95

20 x 1 Parallel Display

- Built-in controller: HD44780
- Character font size: 0.45"W x 0.26"H
- Maximum input voltage: 5.5VDC   • 14-pin terminal
- Operating input voltage: 5VDC   • Weight: 0.3 lbs.
- Display size: 6.5"L x 1.3"W
- Module size: 7.2"L x 1.6"W x 0.4"T

Part No.	Description	1	10	25
206615CP	LCD Module	$49.95	$44.95	$39.95

Industrial Panel Meter

0 to 1mA DC

- Low cost, high quality
- Basic DC accuracy to 0.3%
- Direct replacement for: Yokogawa, Modutec, Jewell, WPIC, Hoyt, Crompton, Brighton • UL recognized
- DC Range: 0 – 1mA Taut Band
- Size: 1.5"L x 1.7"W x 1.7"H   • Depth: 1.2"

Part No.	Product No.	1	10	25
171897CP	PMG6S	$14.45	$13.05	$11.75

See the yellow highlighted items.

Jameco Special Values!

Details on page 4.

Scott Edwards Electronics, Inc.

Serial LCD Modules

- Includes instruction codes for character generation, cursor control, printing, etc. Examples for Stamps in PBASIC included.
- One-year warranty

Ideal for use w/ BASIC Stamps (pg 188), 80C52-BASIC controllers (pg 67) and PCs!

16 characters x 2 lines Integrated Display

- 1200–9600bps serial input with 16-byte input buffer
- Four inputs for switches/buttons that can be read via the serial connection
- EEPROM storage of settings, six custom characters, and a text screen that can be automatically displayed at startup (splash screen)
- Serial control of the standard LED backlight
- Low current draw; 5mA (backlight off) to 40mA (backlight on and bright)
- Power requirement: 4.8 – 5.5VDC @ 5mA (recommend P/N 164101CP, pg 51)
- Module size: 3.2"L x 2.0"W x 0.5"T

Part No.	Description	1	10	25
150990CP	LCD module	$48.95	$44.09	$39.65

16 characters x 2 lines LCD Serial Backpack®

- High-contrast supertwist display
- Serial "backpack" accepts RS232, or inverted CMOS, TTL at 2400 or 9600bps
- Power requirement: 4.8 – 5.5VDC @ 3mA (recommend P/N 164101CP, pg 51)
- Connector: 5-pin header (recommend P/N 163686CP, pg 128)   • Module size: 3.1"L x1.4"W x0.7"T

Part No.	Description	1	10	25
133129CP	LCD module	$59.95	$53.99	$48.99

20 Characters x 4 Lines Graphics LCD

- 120 x 32 pixel graphics screen
- 2400 or 9600 bps serial input
- EEPROM stores text font and 6 full-screen images
- Supports multiple fonts and font sizes
- Included utility program lets you create and download pictures and fonts
- Power requirement: 9V battery or 5V power supply (recommend P/N 164101CP, pg 51)
- Module size: 3.1"L x 1.9"W x 0.8"T

Includes: Battery snap connectors, sample programs and manual on disk

Part No.	Description	1	10
158166CP	20 x 4 serial LCD display	$119.95	$107.99

40 characters x 4 lines LCD Serial Backpack®

- High-contrast supertwist display with unique "big character": backlet mode – prints 1" numbers and letters automatically
- Serial input at 1200, 2400, 4800 or 9600bps
- Power requirement: 5VDC @ <10mA (recommend P/N 164101CP, pg 51)
- Module size: 7.5"L x 2.2"W x 0.9"T

Part No.	Description	1	10
136485CP	40 x 4 serial LCD display	$199.95	$179.99

0.6" High 3½-Digit & 4½-Digit LCD Digital Panel Meters

108388CP **175951CP** **146835CP**

123140CP

- Input Ranges: 200mV, 20V, 200V, 500V
- Supply voltage: 9-12VDC (recommend 9V battery P/N 151095CP, pg 200)
- Automatic polarity indication
- Input impedance: >100MΩ • Accuracy: ±0.5%
- Size: 2.7"L x 1.7"W **146835CP:** Backlit display

Includes: Bezel

Part No.	Description	1	10	25
108388CP	"1999" LCD DPM ...	$12.95	$11.95	$10.95
175951CP	"1999" LCD DPM	12.95	11.95	10.95
146835CP	"1999" LCD DPM	19.95	17.99	16.19
123140CP	"19999" LCD DPM ...	27.95	24.95	22.49

VL 0.5" High 4-Digit Field Effect LCD Display

- Compatible with socket P/N 78641CP (2), pg 122
- Pin spacing: 0.1" centers
- 40-pin package (no connector required)
- Size: 2.0"L x 1.2"H x 0.1"D
- Digital multimeters, thermometers, pressure gauges, timers, clocks (12 or 24 hour format) and frequency counters
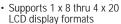
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17110CP

Part No.	Description	1	10	25
17110CP	4-digit LCD w/ pins	$14.95	$13.49	$12.15

Serial LCD Interface Module

For Parallel LCD Displays with Hitachi 44780 Chipset

- Supports 1 x 8 thru 4 x 20 LCD display formats
- Provides word wrap, control character processing for display blanking, cursor blanking, up-down-left-right cursor controls
- Compatible with P/Ns 151933CP, 171715CP and 198803CP (above & pg 95) • Size: 1.5"L x 1.0"W

TRISYS

Part No.	Description	1	10	25
157981CP	LCD serial module	$22.95	$20.95	$18.95

16 Characters x 1 Line Parallel LCD Module

- Super twisted nematic gray, transflective type
- Easily interfaced to a microprocessor with common 4-bit and 8-bit parallel inputs/outputs • Without backlight
- Connected at general purpose CMOS signal level
- Built-in character generator ROM (225 characters @ 5 x 7 dot matrix pattern; RAM (8 different user programmed); and display data RAM (80 x 8-bits)
- Display clear, cursor home, display & cursor ON/OFF, blink character, cursor shift, and display shift feature

Requirements: 4.5VDC – 5.5VDC @ 600mA wall transformer (recommend P/N 171301CP, pg 51)

Part No.	Module Size	1	10	25
198803CP	3.1"L x 1.4"W x 0.3"T	$13.95	$10.46	$7.35

LCD Parallel Displays

- 8-bit interface data bus
- Controller: KS0066U or equivalent
- Character font size: 0.125"W x 0.200"H
- Maximum input voltage: 5.3VDC
- Operating input voltage: 5VDC (recommend P/N 164101CP, pg 51)

171715CP

171715CP: 16 Characters x 2 Lines
- Display size: 2.5"L x 0.7"W
- Module size: 3.4"L x 1.2"W x 0.5"T

171723CP: 20 Characters x 2 Lines
- Display size: 3.3"L x 0.7"W
- Module size: 4.6"L x 1.5"W x 0.4"T

Part No.	Prod. No.	Description	1	10	25
171715CP	AC162A	14-pin/term	$19.95	$17.95	$15.95
171723CP	AC2 02A	16-pin/terM	24.95	22.49	20.25

16 x 4 Parallel LCD Module

- 16 x 4 character display (.78"H)
- Character font: 5 x 8 dots
- Input data: 4-bit or 8-bit interface available
- Display size: 2.4"L x 1.0"W x 0.06"T
- Module size: 3.4"L x 2.4"W x 0.25"T

Point Six

Requires: 4.5V @ 2mA wall transformer (recommend P/N 164101CP, pg 51)

Part No.	Description	1	10	25
151933CP	16 x 4 parallel LCD ...	$24.95	$22.49	$19.95

40 x 2 Parallel LCD Module with Backlight

- 40 x 2 character display
- Control chip HCD44780
- Character font: 5 x 8 dots
- Column driver: KS0063B
- Backlight: yellow-green
- Supply voltage (logic): 5VDC @ 5mA
- Display size: 5.81"L x 0.45"W
- Module size: 7.2"L x 1.4"W x 0.4" Thick

Part No.	Description	1	10	25
215159CP	40 x 2 parallel LCD	$29.99	$26.99	$24.29

LCD MSG II Discrete LCD Message Module

TRISYS

A simple LCD discrete module that provides the user the ability to display custom messages on a standard LCD module, quickly and easily. The module contains its own embedded processor and non-volatile storage for up to 16 user-definable messages each containing up to 160 characters, plus a 25-character memo message for product I.D. or serialization.

- Switch, up/down, automatic, ticker tape
- Individual message blink attribute
- LCD standalone self-test display
- Negative 5V generation for extended temperature range LCD modules
- Provides serial programmability
- Selectable communication ports/display formats
- Windows® message editor: full copy, cut and paste operations
- Compatible with P/Ns 151933CP, 171715CP and 198803CP (left & pg 95)

Part No.	Description	1	10	25
199646CP	MSG II	$44.95	$40.49	$36.45

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Online www.Jameco.com

CDS Photocells

- Applications include: auto-focus lenses, exposure meters, contrast controls for TVs, dimmer or light switches, flame detectors, electronic toys, street lamp switches, optocouplers • Generate variable signal based on detection of light levels
- Operating temperature: -30°C to +70°C • Cadmium Sulfide (CDS) • Soldering: 230°C for 3 seconds

120299CP

202438CP

Part No.	Mfr. Cross Ref. No.	Rating Vp	Rating mW	Resistance (Ω) Dark	Resistance (Ω) Light	Size (inches) A	Size (inches) B	Lead Spacing (inches)	Lead Length (inches)	Pricing 1	Pricing 10	Pricing 100	Pricing 1000
136063CP	CDST18	20	40	100k	10k	0.14	0.17	0.10	1.50	$.69	$.62	$.55	$.49
136047CP	CDST05	50	250	100k	10k	0.25	0.29	0.18	1.50	.69	.62	.55	.49
136055CP	CDST08	50	200	100k	10k	0.40	0.44	0.30	1.50	.69	.62	.55	.49
202366CP	CDS0029001	150	90	300k	27k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202374CP	CDS0029006	150	90	5M	80k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202391CP	CDS0029203	150	90	20M	5k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202382CP	CDS0029008	150	90	20M	10k	0.14	0.17	0.10	1.02	1.49	1.35	1.19	1.09
202420CP	CDS0018003	150	100	500k	16k	0.17	0.20	0.13	1.02	1.49	1.35	1.19	1.09
202403CP	CDS0018001	150	100	200k	3k	0.17	0.20	0.13	1.02	1.49	1.35	1.19	1.09
202411CP	CDS0018006	150	100	5M	80k	0.17	0.20	0.13	1.02	1.49	1.35	1.19	1.09
120310CP	CDS002	150	90	2M	27k	0.14	0.17	0.10	1.44	1.45	1.20	1.09	.99
202438CP	CDS0037004	200	150	500k	15k	0.25	0.29	0.20	1.44	1.79	1.59	1.45	1.29
120301CP	CDS0037001	200	150	300k	3.6k	0.25	0.29	0.20	1.44	1.79	1.59	1.45	1.29
202446CP	CDS0037005	200	150	20M	50k	0.25	0.29	0.20	1.44	1.79	1.59	1.45	1.29
120299CP	CDS0045001	350	400	300k	8k	0.38	0.43	0.30	1.44	1.79	1.59	1.45	1.29
202454CP	CDS0045003	350	400	1M	12k	0.37	0.43	0.30	1.44	1.79	1.59	1.45	1.29

Color Code Legend
New Sale Qty. Save

Miniature Toggle Switches

• Mounting hole diameter: 1/4"
Includes: Mounting hardware

Fig. 1 Fig. 2 Fig. 3 Fig. 4 Fig. 5 Fig. 6

Part No.	Mfr. Cross Ref. No.	Fig.	Pins	Type ( ) Momentary	Dimensions L" x W" x D"	Lead Spacing A"	B"	C"	Contact Rating (A @ VAC)	Lead Type	Lever Type	1	10	100	250	1000
76523CP	JMT113	1	2	SPST on-off	.52 x .32 x .38	—	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	$1.15	$1.03	$.93	$.75	$.65
21936CP	JMT123	3	3	SPDT on-on	.52 x .32 x .38	—	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.15	1.03	.93	.75	.65
21910CP	JMT121	3	3	SPDT on-off-on	.52 x .32 x .38	—	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.35	1.25	1.09	.95	.85
22832CP	LFH123	3	3	SPDT on-on	.52 x .28 x .36	—	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Flat	1.15	1.05	.95	.85	.75
75854CP	SWM132	3	3	SPDT on-on	.52 x .32 x .38	—	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.19	1.09	.99	.79	.55
75889CP	SWM129	3	3	SPDT (on)-off-(on)	.52 x .32 x .38	—	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.69	1.55	1.32	.91	.79
26331CP	MPC123	3	3	SPDT on-on	.52 x .32 x .37	—	.185	—	6 @ 125 & 3 @ 250	PC	Round	1.39	1.25	1.12	.95	.78
26315CP	MPC121	3	3	SPDT on-off-on	.52 x .32 x .37	—	.185	—	5 @ 125 & 2 @ 250	PC	Round	1.29	1.15	.89	.70	.49
71597CP	SWM148	4	3	SPDT on-on	.52 x .32 x .38	—	.185	.20	5 @ 125 & 2 @ 250	PC right angle	Round	1.19	1.09	.85	.65	.45
75871CP	SWM145	5	3	SPDT on-on	.52 x .32 x .38	—	.185	.20	6 @ 125 & 3 @ 250	PC right angle	Round	1.49	1.35	1.09	.86	.79
22841CP	LFH221	2	6	DPDT on-off-on	.52 x .52 x .38	.20	.185	—	3 @ 125 & 1 @ 250	Solder lugs	Flat	1.45	1.35	1.19	1.09	.95
21979CP	JMT223	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.49	1.29	1.15	.99	.59
22859CP	LFH223	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Flat	1.29	1.19	1.05	.95	.85
105814CP	SWA208	2	6	DPDT on-(on)	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	Solder lugs	Round	1.75	1.57	1.25	.95	.69
75900CP	SWM133	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.49	1.35	1.25	.99	.85
21952CP	JMT221	2	6	DPDT on-off-on	.52 x .52 x .38	.20	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.29	1.16	1.04	.89	.75
75951CP	SWM130	2	6	DPDT (on)-off-(on)	.52 x .52 x .38	.20	.185	—	6 @ 125 & 3 @ 250	Solder lugs	Round	1.49	1.35	1.25	.99	.89
26366CP	MPC223	2	6	DPDT on-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	PC	Round	1.49	1.35	1.15	.85	.59
26358CP	MPC221	2	6	DPDT on-off-on	.52 x .52 x .38	.20	.185	—	5 @ 125 & 2 @ 250	PC	Round	1.19	1.09	.86	.64	.45
202964CP	WI24	6	6	DPDT on-off-(on)	.50 x .50 x .46	.15	.15	.20	6 @ 125 & 3 @ 250	PC right angle	Round	1.29	1.16	1.04	.95	.85

Subminiature Toggle Switches

• Mounting hole diameter: 7/32"   • Pre-tinned leads   • Metal construction
Includes: Mounting hardware

Fig. 1 Fig. 2 Fig. 3

Part No.	Mfr. Cross Ref. No.	Fig.	Pins	Type	Dimensions L" x W" x D"	Lead Spacing A"	B"	Contact Rating	Lead Type	Lever Type	1	10	100	250	1000
106067CP	SWP124	1	3	SPDT on-on	.25 x .33 x .40	.20	.10	30mA @ 5VDC	PC right angle	Round	$1.99	$1.83	$1.59	$1.44	$1.32
72160CP	SW1501	2	2	SPST on-off	.33 x .21 x .33	.10	—	1.5A @ 250VAC	Solder lugs	Round	1.29	1.24	1.14	.98	.79
75969CP	SWM136	2	3	SPDT on-on	.33 x .21 x .33	.10	—	3A @ 125VAC	Solder lugs	Round	1.55	1.44	1.21	.86	.63
72557CP	SW1502	2	3	SPDT on-off-on	.33 x .21 x .33	.10	—	1.5A @ 250VAC	Solder lugs	Round	1.35	1.25	.99	.75	.55
138907CP	SW1503	3	6	DPDT on-off-on	.36 x .37 x .33	.17	.10	3A @ 120VAC	Solder lugs	Round	1.29	1.05	.85	.65	.55
75977CP	SWM137	3	6	DPDT on-on	.33 x .37 x .33	.17	.10	1.5A @ 250VAC	Solder lugs	Round	1.29	1.05	.85	.65	.55

Full Size Toggle Switches

• Panel mount   • Mounting hole diameter: 1/2"   • Full-size round lever
• Medium duty   • Keyed plate indicates switch position
Includes: Mounting hardware and on/off plate

2-pin or 4-pin   6-pin   Fig. 1   Fig. 2

Part No.	Mfr. Cross Ref. No.	Fig.	Pins	Type ( ) Momentary	Dimensions L" x W" x D"	Lead Spacing A"	B"	C"	Contact Rating (A @ VAC)	Lead Type	Lever Type	1	10	100	250	1000
76241CP	SWM128	1	2	SPST on-off	1.00 x .56 x .52	.23	—	—	4 @ 125 & 2 @ 250	Solder lugs	Round	$1.45	$1.29	$1.15	$.99	$.89
158060CP	JKN32	1	4	DPST on-off	1.00 x .56 x .52	.23	—	.23	4 @ 125 & 2 @ 250	Solder lugs	Round	1.15	1.05	.95	.85	.75
76259CP	SWM126	1	6	DPDT on-on	1.12 x .77 x .60	.30	.60	.40	5 @ 125 & 3 @ 250	Solder lugs	Round	1.75	1.59	1.29	.99	.85
158078CP	JKN3CC	1	6	DPDT on-on	1.19 x .76 x .73	.44	.59	.44	10 @ 125 & 6 @ 250	Screw lugs	Round	1.75	1.59	1.29	.99	.85
76232CP	SWM125	2	2	SPST on-off	1.00 x .53 x .51	—	—	—	6 @ 125 & 3 @ 250	6" lead wire	Round	1.75	1.59	1.45	1.29	1.15

Slide Switches

(UL)

• Two mounting flanges
• Top actuation except P/N 204142CP
• Nylon actuator
• Phenolic insulated

SALE

109170CP   206367CP   202770CP   202981CP   203001CP   204142CP   161816CP   202972CP   202930CP   202948CP

Part No.	Pins	Type	Description	Housing Material #	Dimensions L"	W"	D"	Lead Spacing A"	B"	Contact Rating	Lead Length	Actuator Height	1	10	100	250
109170CP	3	SPDT on-on	PC mount	Plastic	.22	.45	.23	—	.12	0.5A @ 50VDC	.17"	.15"	$.35	$.29	$.22	$.17
206367CP	3	SPDT on-off	PC mount right angle	Metal	.26	.52	.27	.37	.20	0.5A @ 125VAC	.27"	.31"	.34	.30	.26	.22
202770CP	6	SPDT on-on	PC mount	Plastic	.71	.36	.38	.19	.20	0.1A @ 30VDC	.17"	.32"	.39	.31	.23	.17
202981CP	4	SP3T on-on-on	PC mount right angle	Metal	.61	.24	.18	—	.10	0.3A @ 125VAC	.26"	.15"	.29	.26	.23	.19
203001CP	3	SPDT on-off-on	PC mount right angle	Metal	.36	.20	.39	—	.11	0.1A @ 28VDC	.18"	.10"	.29	.26	.23	.19
204142CP*	3	SPDT on-on	PC mount	Plastic	.77	.40	.37	—	.19	2.0A @ 28VDC	.19"	.17"	.35	.29	.22	.15
161816CP†	6	DPDT on-on	PC mount	Plastic	.38	.14	.13	.13	.11	0.1A @ 20VDC	.11"	.08"	.49	.45	.34	.24
202972CP	6	DPDT on-on	PC mount	Plastic	.77	.43	.29	.24	.18	1.0A @ 24VDC	.21"	.51"	.29	.26	.23	.19
202930CP	6	DPDT on-on	PC mount	Plastic	.76	.44	.29	.22	.18	4A @ 28VDC	.23"	.40"	.29	.26	.23	.19
202948CP	3	SPDT on-on	PC mount right angle	Metal	.50	.27	.26	.38	.19	6A @ 28VDC	.13"	.19"	.29	.26	.23	.19

*Side actuated   † Plastic – flanges   # Plastic: 6/6 nylon; metal: steel zinc plated

JAMECO

Pushbutton Switches

• Contact rating: 3A @ 125VAC (except P/N 106112CP: 3A @ 110VAC)   • 2-pin   • Lead type: solder terminal

SALE

Mountain Switch

Figure 1

Figure 2

Miniature Soft Touch Switches

Part No.	Product No.	Fig.	Type () Momentary	Dimensions	Lead Spacing	Thread Diameter	Button Color	Pricing 1	10	100	1000
164494CP	DS450R	1	SPST off-on	1.2"L x .59"Dia.	.175"	.387"	Red	$1.79	$1.73	$1.69	$1.59
164486CP	DS463R	1	SPST off-(on)	1.2"L x .59"Dia.	.175"	.387"	Red	1.64	1.58	1.47	1.45
164523CP	DS466R	2	SPST off-(on)	1.2"L x .60"Sq.	.160"	.383"	Red	1.67	1.60	1.49	1.47
164558CP	DS471R	3	SPST off-(on)	1.2"L x .75"Sq.	.160"	.387"	Red	1.59	1.49	1.45	1.39

† Click type

Figure 3

Figure 4

Standard Touch Switches

Part No.	Product No.	Fig.	Type () Momentary	Dimensions	Lead Spacing	Thread Diameter	Button Color	Pricing 1	10	100	1000
164566CP	MS402R	4	SPST off-(on)	.73"L x .22"Dia.	.078"	.190"	Red	$.99	$.96	$.90	$.89
164582CP	DS016B	5	SPST off-(on)	.88"L x .46"Dia.	.220"	.354"	Black	1.49	1.39	1.25	1.15
164638CP	MS3120R	6	SPST off-(on)	1.1"L x .31"Dia.	.175"	.268"	Red	.89	.79	.69	.55
164671CP	NS801MOB	7	SPST off-(on)	1.1"L x .59"Dia.	.213"	.468"	Black	2.15	1.89	1.69	1.55
106112CP	DS412R*	8	SPST off-(on)	.63"L x .66"Dia.	.275"	.750"	Red	1.19	.99	.89	.85

* Solder lugs

Figure 5

Figure 6

Figure 7

Figure 8

Pushbutton Switches

APEM

IP Series Pushbutton Switches

• Panel mount
• Insulation resistance: 1GΩ min. @ 500VDC
• Dielectric strength: 1500Vrms min.
• Initial contact resistance: 50mΩ max.
• Mounting hole: 1/2"Dia.
• Mechanical life: 1,000,000 cycles min.

171758CP
171766CP

Part No.	Product No.	Pins	Type () Momentary	Dimensions L	W	D	Lead Spacing	Contact Rating	Terminal Type	Pricing 1	10	100	250
171758CP	IPR3SAD2	2	SPST off-(on)	0.82"	—	0.46"	0.19"	0.2A @ 250VAC	Solder	$10.39	$9.35	$8.45	$7.49
171766CP	IPC3SAD6	2	SPST off-(on)	0.82"	0.69"	0.46"	0.19"	0.2A @ 250VAC	Solder	8.99	7.99	7.29	6.59

AV Series Pushbutton Switches

APEM

• Panel mount
• Mounting hole: 3/4"Dia. for P/N 171774CP; 0.85"Dia. for P/N 191062CP
• Insulation resistance: 1000MΩ min
• **171774CP:** Initial contact resistance: 10mΩ max.   • Dielectric strength: 1000Vrms min.
• **191062CP:** w/ mushroom head actuator   • Initial contact resistance: 100mΩ max.   • Dielectric strength: 2000Vrms min.

171774CP
191062CP

Part No.	Product No.	Pins	Type () Momentary	Dimensions L	D	Lead Spacing A	B	Contact Rating	Terminal Type	Pricing 1	10	100	250
171774CP	AV191003C900	2	SPST off-(on)	1.20"	0.87"	0.37"	—	2A @ 48VDC	Screw	$10.95	$9.85	$8.86	$7.98
191062CP	AV22PNA62	3	SPDT off-(on)	1.41"	1.18"	0.24"	0.35"	5A @ 250VAC	Solder	29.95	26.95	24.25	21.85

Pushbutton Switches

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Part Number	Mfr. Cross Ref. No.	Fig.	Pins	Mounting Hole Dia.	Type () Momentary	Dimensions (L" x W" x D")	Lead Spacing A"	B"	Contact Rating	Terminal Type	Button Color	Pricing 1	10	100	250	1000
26622CP	MS102	1	2	1/4"	SPST off-(on)	.65 (D) x 1.10 (E)	—	.14	3A @ 125VAC	Solder lugs	Red	$.55	$.50	$.45	$.35	$.29
26649CP	MS103	1	2	1/4"	SPST on-(off)	.65 (D) x 1.10 (E)	—	.17	3A @ 125VAC	Solder lugs	Black	.55	.50	.45	.35	.29
154878CP	PS11-123	2	3	1/4"	SPDT on-(on)	.50 x .27 x .37	—	.14	5A @ 125VAC	Solder, right angle	Red	.85	.75	.69	.59	.45
71642CP	SWB210	3	2	7/32"	SPST off-(on)	.36 x .20 x .33	.20	.20	1A @ 120VAC	PC right angle	Black	2.19	1.99	1.78	1.60	1.39
200774CP	TPI2SH8AQE	3	3	7/32"	SPDT off-(on)	.32 x .20 x .33	.20	.10	1A @ 120VAC	PC right angle	Black	4.79	3.85	2.86	2.24	1.99
202999CP	BB16	4	3	1/4"	SPDT on-on	.39 x .35 x .35	.18	.10	0.1A @ 28VAC	Solder, right angle	White	1.69	1.56	1.43	1.25	.89
121304CP	CK8121	5	3	1/4"	SPDT on-(on)	.52 x .27 x .38	—	.185	5A @ 125VAC	Solder lugs	White	3.59	3.25	2.95	2.65	2.39
28062CP	PB126	5	3	1/4"	SPDT on-(on)	.52 x .28 x .38	—	.185	5A @ 120VAC	Solder lugs	Red	3.69	3.35	2.69	2.29	1.99
22200CP	J1881	6	2*	3/8"	SPST on-off, Alt†	.65 x .52 x .40	.25	—	2A @ 14VDC	5" Pigtail	White	1.19	1.09	.94	.83	.72
22218CP	J1882	6	2*	3/8"	SPST off-(on)	.65 x .52 x .40	.25	—	2A @ 14VDC	5" Pigtail	Red	1.09	.98	.78	.69	.59
174414CP	R13-510A	7	2	1/2"	SPST off-(on)	.67 (L) x .31 (D)	—	.167	3A @ 125VAC	Solder lugs	Red	.89	.80	.72	.65	.58
206324CP	SPPJ31319A	8	3	1/4"	SPDT on-off	.58 x .21 x .33	.18	.11	2A @ 30VDC	Solder lugs	Blue	.49	.39	.32	.25	.25

† Alt = alternate action   * Lead wires

Miniature Basic Lever Switches

HIGHLY

- 3 terminals: common; normally open; normally closed
- Size: 1.10"L x 0.40"W x 0.63"H

OMRON Honeywell

187805CP/213479CP   191388CP   159581CP/187792CP 203545CP   159572CP

Contact Part No.	Product No.	Contact Manufacturer	Service Life Actuator Type	Form	Contact Rating	Resistance (initial)	Service Life (Mech./Elec.)	Terminal Type	Pricing 1	25	50
159572CP	VS10N051C	Highly Electric	Hinged roller (0.60"L)	SPDT-NC	10A@125VAC, 10A@250VAC	15milliΩ (max.)	10M/100k	.183" quick connect	$2.89	$2.54	$2.28
159581CP	VS10N021C2	Highly Electric	Hinge lever (1.05"L)	SPDT-NC	10A@125VAC, 10A@250VAC	15milliΩ (max.)	10M/100k	.183" quick connect	2.45	2.25	1.99
191388CP	V3-715	Honeywell	Pin plunger	SPDT-NC	0.5A@125VAC, 10A@250VAC	—	10M/1M	.220" solder	1.65	1.24	.85
203545CP	V7-3E11D8-022	Honeywell	Hinge lever (1.07"L)	SPDT-NC	0.5A@125VAC, 10A@250VAC	—	10M/100k	.183" quick connect	2.79	2.59	2.29
187792CP	V-10G2-1C24K	Omron	Hinge lever (1.08"L)	SPDT-NC	0.1A@125VAC, 10A@250VAC	30milliΩ (max.)	50M/300k	.183" quick connect	2.59	2.35	2.19
187805CP	V-10G3-1C24K	Omron	Long hinge lever (2.01"L)	SPDT-NC	0.1A@125VAC, 10A@250VAC	30milliΩ (max.)	50M/300k	.183" quick connect	2.86	2.61	2.41
213479CP	DMC Series	Defond	Long hinge lever (3.56"L)	SPDT-NC	15.1A@125VAC, 15.1A@250VAC	—	—	.250" quick connect	1.85	1.65	1.45

SS Subminiature Basic Switches

HIGHLY

- Economical, subminiature basic switch offers long service life
- Free from overtravel restrictions, permits easy setting
- Lead spacing: A = 0.35"; B= 0.29"
- Dimensions: 0.78"L x 0.25"W x 0.40"H

OMRON

SALE

A — B

187709CP   187733CP   159599CP   187645CP

Part No.	Product No.	Manufacturer	Actuator Type	Contact Form	Contact Rating	Contact Force	Service Life (Mech./Elec.)	Terminal Type	Pricing 1	25	50
187709CP	SS-5GL	Omron	Hinge lever (0.6"L)	SPDT-NC	5A @ 125VAC, 3A @ 250VAC	50g	30M/200k	Solder	$1.59	$1.45	$1.29
187733CP	SS-5GL2	Omron	Hinged roller (0.6"L)	SPDT-NC	5A @ 125VAC, 3A @ 250VAC	50g	30M/200k	Solder	1.95	1.75	1.59
159599CP	SS0505A	Highly Electric	Hinge roller (0.7"L)	SPDT-NC	5A @ 125VAC, 3A @ 250VAC	45g	30M/200k	Solder	3.25	2.92	2.59
187645CP	SS-10D	Omron	Pin plunger	SPDT-NC	10.1A @ 125VAC, 10.1A @ 250VAC	150g	30M/200k	PCB, straight vertical	1.99	1.79	1.65

OMRON D2F Series Subminiature Snap-Action Switches

Ideal for a wide variety of applications from household appliances and office equipment to audio and communications equipment.

- Dimensions: 0.50"L x 0.23"W x 0.26"H   • Lead spacing: 0.2"

188824CP   188867CP

Part No.	Product No.	Manufacturer	Actuator Type	Contact Form	Contact Rating	Contact Resistance (initial)	Service Life (Mech./Elec.)	Terminal Type	Pricing 1	25	50
188824CP	D2F-01	Omron	Pin plunger	SPDT-NC	0.1A @ 30VDC	100milliΩ (max.)	1M/30k	PCB	$.87	$.78	$.70
188867CP	D2F-L	Omron	Hinge lever (0.50"L)	SPDT-NC	2A @ 30VDC, 3A @ 125VAC	30milliΩ (max.)	1M/30k	PCB	1.05	.95	.85

SPST Round Keylock Switches

- Used in computer & other security systems
- Key removable from 2 positions   • Two keys
- Mounting hole = 0.75" except P/N 106649CP = 0.5"
196648CP: all keys are alike   **Includes:** Mounting nut

106649CP   105831CP/196648CP

L

Part No.	Mfr. Cross Ref. No.	No. Flat, Dia.	Length	Terminal	Voltage/Current	1	10	50	100
106649CP	KS4B	2, .21"	.55"	Barrel	125VAC/3A	$3.55	$3.25	$2.89	$2.49
105831CP	KS3B	2, .66"	1.48"	.25" quick connect	125VAC/6A	3.99	3.59	3.29	2.99
196648CP	3313E-M	2, .66"	1.48"	.25" quick connect	125VAC/6A	4.49	3.99	3.65	3.29

PCB Plunger Switch

Use in Place of Shorting Block

- SPST (on/off)
- Contact rating: 50mA @ 24VDC
- Non-removable plunger
- Size: 0.2"W x 0.1"D x 0.38"H
- Lead length: 0.1"L
- **10 piece minimum**

Part No.	Description	10	100	1000
172700CP	Plunger switch	$.19	$.14	$.10

Magnetic Reed Switches

- NO (normally open)   • Contact form: SPST

SALE

L

164081CP

Part No.	Mfr. Cross Ref. No.	Contact Rating	Size (L" x Dia.")	1	10	100	1000
171871CP	MKA141011015	500mA @ 100VDC	0.53 x 0.1	$.89	$.65	$.49	$.45
164081CP	MRS1	1A @ 250VAC; 1A @ 50VDC	1.43 x 0.2	.87	.61	.42	.38

We'll match the advertised price of any like product.

Jameco's Low Price Guarantee

It's that simple!

Jameco carries a wide variety of Relays!

See pages 102-104 for our complete selection.

Pushbutton Binary Coded Decimal (BCD) Switch

26788CP (2 switches shown)

Thumbwheel Binary Coded Decimal (BCD) Switch

(2 switches shown) 26817CP

Pushbutton and Thumbwheel Switch Specifications:

- Contact resistance: 100mΩ max.
- 1/16" maximum panel thickness
- Gold plated BE-CU alloy contacts
- 0.15A @ 50VAC/28VDC
- Break before make
- Operating temperature: -40°C to +85°C
- Continuous load: 1 amp max.
- Front snap-tab mounting with end plates
- Switches snap together

Part No.	Mfr. Cross Ref. No.	Description	Size (L" x W" x D")	Character Height	Pricing 1	10	50	100
26788CP	MX72	10-position pushbutton	1.2 x 0.3 x 1.7	0.19"	$5.69	$5.15	$4.25	$3.29
26761CP	MXEP2	Mounting end plates for 26788	1.2 x 0.2 x 1.1	—	1.15	.99	.89	.79
26817CP	MX83	10-position thumbwheel	1.2 x 0.3 x 1.9	0.25"	4.49	3.95	3.55	3.19
26770CP	MXEP3	Mounting end plates for 26817	1.2 x 0.2 x 1.3	—	1.15	.99	.90	.80

Mini Pushbutton BCD Switch

- Operating temperature: -10˚C to +65˚C
- Switches snap together
- Positive logic ("0" all open output)
- 28VDC @ 10A
- Break before make

Part No.	Mfr. Cross Ref. No.	Description	Size (L" x W" x D")	Character Height	1	10	100
136557CP	MX061	10-position straight	0.59 x 0.3 x 1.0	0.12"	$3.79	$3.41	$3.06

Excell Rotary DIP Switches

- Gold plated contacts to ensure reliable, low resistance connection
- Fully sealed construction • Terminals: PC pin leads • Life: 10,000 cycles min.
- Op force: 500g-cm max. • Max. switching load rating: 25mA @ 24VDC
- Material: 94V-0 grade, UL approved fire retardant plastic
- Lead spacing: A = 0.1"; B = 0.3"

SALE

139635CP

139651CP

Part No.	Product No.	Position	Adjust	Code Type	W" x D" x H"	1	10	50	100
139635CP	ERD110RS(DRD10)	10	top	BCD	0.39 x 0.39 x 0.20	$2.65	$2.39	$2.13	$1.89
139651CP	ERD116RS	16	top	Hex	0.39 x 0.20 x 0.39	2.75	2.49	2.22	1.99

Rocker and Lever Type Switches

- Contact rating:
  5A @ 120VAC; 2A @ 250VAC, except P/N 196154CP:
  15A @125VAC; 10A @ 250VAC
- Operating temp.: -30˚ to 85˚C
- Electrical life: 50,000 make and break cycles at full load
- Contact resistance: 10mΩ typical
- Dielectric strength: 1000Vrms @ sea level
- Insulation resistance: 10MΩ min., except P/N196154CP: 100MΩ min.

203490CP: Green and always illuminated

181788CP

196154CP

202497CP

140530CP (Vertical)

155045CP (Horizontal)

SALE

163344CP

203490CP

Part No.	Mfr. Cross Ref. No.	Pins	Type	Dimensions (ins.) L	W	D	Lead Spacing	Lead Type	Pricing 1	10	100	1000
181788CP	R13-121A	2	SPST on-off	.88	.47	.71	N/A	Panel mt. solder eyelet	$.65	$.59	$.55	$.45
196154CP	R30NSA	2	SPST on-off	1.07	.42	.77	N/A	Panel mt. quick discon.	1.75	1.59	1.44	1.35
202497CP	526VBU	2	SPST on-off	.89	.49	.64	N/A	Panel mt. quick discon.	.59	.55	.49	.45
140530CP	CK7101	3	SPDT on-on	.50	.50	.27	.150"	Right angle PC (vert.)	1.25	1.05	.89	.75
155045CP	CK7101A3	3	SPDT on-on	.50	.50	.27	.185"	Right angle PC (horz.)	.95	.81	.74	.65
163344CP	CKD103J5W	3	SPDT on-off-on	.67	.47	.59	N/A	Panel mt. solder eyelet	.99	.89	.79	.69
203490CP	MRT85	4	DPST on-off	.74	.50	.55	N/A	Panel mt. quick discon.	2.25	1.99	1.83	1.65

DIP Switches

206359CP

139002CP

38842CP

139011CP

38800CP

- Switch contacts: SPST
- Switches are numbered
- 50VDC @ 100mA
- Molded construction
- Standard switches have raised lever
- LP switches are flush to casing • Pre-tinned leads

Compatible Socket Chart, see page 122 for Sockets

Switch	Socket	Switch	Socket	Switch	Socket
109057CP	112192CP	38826CP	37161CP	101856CP	38113CP
206359CP	51570CP	38834CP	37161CP	38797CP	38607CP
38818CP	51570CP	38842CP	37372CP	38800CP	39378CP
139002CP	51570CP	139011CP	37372CP	202921CP	37372CP

Part No.	Mfr. Cross Ref. No.*	Pos.	Pricing 1	10	100	1000
109057CP	206-2	2	$.85	$.75	$.69	$.56
206359CP	206-3	3	.79	.65	.55	.45
38818CP	206-4	4	.79	.65	.55	.45
139002CP	206-4LP	4	.79	.70	.63	.55
38826CP	206-6	6	.89	.79	.69	.59
38834CP	206-7	7	.95	.76	.57	.40
38842CP	206-8	8	.89	.80	.72	.64
139011CP	206-8LP	8	.85	.79	.69	.45
202921CP	DIPSWRA8	8	.89	.79	.69	.62
101856CP	206-9	9	.85	.79	.69	.49
38797CP	206-10	10	.99	.79	.59	.42
38800CP	206-12	12	1.09	.99	.89	.79

* Manufacturer may vary

Tri-State DIP Switch

- Switch contacts: bussed, tri-state
- Labeled tri-state positions (+, 0, -)
- Contact rating: 24VDC @ 25mA • 8 positions
- Two isolated busses • Pre-tinned leads
- Compatible socket, use P/N 37372CP, pg 122

Part No.	Mfr. Cross Ref. No.	1	10	50	100
138991CP	ETA108E	$1.95	$1.75	$1.55	$1.35

Replacement Switches for AT-Style Computer Cases

PC Pushbutton Switches

- Alternate action double pole switch
- Contacts rated at 250VAC
- UL/CSA/VDE approved
- Size: 0.9"L x 0.7"W x 0.9"D

127044CP

174238CP
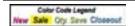
Part No.	Description	Current	1	10	100
127044CP	PC push button	7.5A ..	$2.49	$1.89	$1.39
174238CP	PC push button	8A	2.59	1.94	1.35

PC Rocker Switch

- For mini-tower cases
- DPST
- Contacts rated at 250VAC
- UL/CSA approved
- Size: 0.9"L x 1.2"W x 1.4"D

Part No.	Description	Current	1	10	100
127028CP	PC rocker	10A	$2.95	$2.69	$2.39
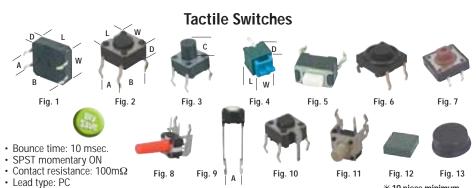
Color Code Legend
New Sale Qty Save Closeout

Color Code Legend
New Sale Qty. Save

Tactile Switches

Fig. 1 (D, L, A, B, W)
Fig. 2 (L, W, D, A, B)
Fig. 3 (C)
Fig. 4 (D, L, W)
Fig. 5
Fig. 6
Fig. 7
Fig. 8
Fig. 9 (A)
Fig. 10
Fig. 11
Fig. 12
Fig. 13

- Bounce time: 10 msec.
- SPST momentary ON
- Contact resistance: 100mΩ
- Lead type: PC

✳ 10 piece minimum

Part No.	Mfr. Cross Ref. No.*	Fig.	Pins	Dimensions (in.) L	W	D	C	Lead Spacing A"	B"	Contact Rating (mA @ VDC)	Button Color	Pricing 1	10	100	250
122972CP	DTS1212	1	4	.47	.47	.18	—	.20	.50	20 @ 15	Black	$.28	$.23	$.20	$.18
119010CP	KTIIBICM	2	8	.24	.24	.15	0.3	.17	.25	20 @ 15	Black	.29	.23	.17	.12
149948CP	KT11P4CM	3	4	.24	.24	.15	1.7	.17	.25	20 @ 15	Black	✳	.23	.21	.19
115086CP	KIE22	4	2	.24	.24	.22	—	—	.25	20 @ 15	Blue	✳	.19	.12	.10
175652CP	PBS35	6	4	.31	.31	.10	—	.20	.35	20 @ 15	Black	✳	.19	.15	.11
199726CP	EVQ11A04M	9	2	.24	.24	.14	0.3	.20	—	20 @ 15	White	✳	.19	.17	.13
200361CP	EVQPB04K†	10	5	.24	.24	.14	0.3	.17	.26	20 @ 15	Black	.29	.25	.22	.18
137189CP	PBS103	1	4	.47	.47	.17	—	.20	.50	50 @ 12	Black	.39	.35	.32	.19
153251CP	SDT620K	2	4	.24	.24	.15	0.6	.17	.25	50 @ 12	Black	.29	.25	.20	.18
155248CP	KRS-3550-BK	5	2	.24	.14	.15	—	—	.27	50 @ 12	Black	.24	.20	.17	.18
155256CP	KRS-3550-WH	5	2	.24	.14	.15	—	—	.27	50 @ 12	White	.39	.29	.23	.16
206341CP	KPT1107A	5	2	.24	.14	.15	—	—	.25	50 @ 12	White	.39	.29	.23	.17
155379CP	KRS-1273B	7	4	.47	.47	.14	.14	.17	.53	50 @ 12	Brown	.39	.35	.31	.26
206332CP	MJTP1236E	11	2	.27	.27	.28	—	—	.18	50 @ 12	White	.39	.29	.23	.17
202956CP	KSM06330	8	2	.24	.24	.15	.38	.11	.18	50 @ 24	Red	.29	.22	.15	.15

Tactile Switch Caps

Part No.	Mfr. Cross Ref. No.*	Fig.	Description	Size (in.)	Material	For Use With	10	100	250
155389CP	KRS-CAP-A	12	Square	.47"L x .47"W x .16"H	Plastic	P/N 155379	$.17	$.15	$.15
155408CP	KRS-CAP-B	13	Round	.5"Dia. x .25"H	Plastic	P/N 155379	.13	.11	.11

* Manufacturer may vary   † 200361CP: with ground pin

OMRON B3F Series Miniature Tactile Key Switches

Miniature, low profile and easy mounting. Applications: audio, office & communications equipment, measuring instruments, TVs, VCRs, etc.

- Etended mechanical/electrical service life
- Flux-tight base structure allow automatic soldering of the key switches onto a PC board • Lead spacing: A = 0.18"; B = 0.26"

162886CP B A   **188787CP** B A

Part No.	Type	Operating Force	Dimensions (H x Pitch)	1	25	50	100
162886CP	B3F-1000	General purpose 100g	4.3 mm x 6.5 mm	$.39	$.35	$.32	$.28
188787CP	B3F-1050	High-force 260g	7.3 mm x 6.5 mm	.21	.19	.17	.16

Rotary Switches

- Panel mount • Make before break • Solder lugs • Layers: 1 • Contact rating: 30VDC @ 0.3A
- Insulation resistance: 10MΩ min. • Contact resistance: 30mΩ • Lug size: 0.07"
- Material: solid brass bushings, slotted aluminum shafts, plated frame, phenolic contact wafer (except for P/N 101565CP – plastic casing) • Mounting hole diameter: 3/8"
- Compatible with Jameco rotary knobs P/N 102787CP and 104176CP, pg 115

Includes: Washer and nut

101573CP

Part No.	Mfr. Cross Ref. No.*	Poles	Position	Shaft Size (L" x Dia.")	1	10	100
101531CP	RS0261	1	12	0.46 x 0.25	$1.39	$1.25	$1.12
101573CP	RS022	2	6	0.46 x 0.25	1.35	1.15	.90
101565CP	RS023	3	4	1.16 x 0.25	1.95	1.59	1.25
101557CP	RS024	4	3	0.46 x 0.25	1.09	.81	.57

* Manufacturer may vary

SP5T Rotary Switch

- Panel mount • Fixed stop • 1/8" screwdriver slotted shaft • 0.06" solder terminals
- 36˚ angle of throw • Single pole, 5-positions • Contact resistance: 20mΩ max.
- Insulation resistance: 1,000MΩ minimum between mutually insulated parts
- Material: stainless steel shaft and detent contact springs; brass terminals (gold plated over nickel plate); zinc, cadmium plated bushing

Part No.	Product No.	Description	1	10	100
184727CP	50AB36-01-1-5-F	SP5T panel mount rotary switch $4.79		$3.59	$3.35

16-Button Indoor/Outdoor Keypads

- 9-pin .100" headers
- Fully sealed snap-dome contact
- For indoor or outdoor use
- Contact rating: 24VDC @ 10mA resistive
- Life test: 3,000,000 cycles per key
- Compatible with MOS, TTL and DTL (10Ω max.)
- Recommended connector: P/N 103190CP header and P/N 100765CP pin, pg 128
- Size (housing): 4.7"W x 1.7"H x 0.4"T

196171CP
152063CP

✳ Prepackaged: order in increments of 10 or 100

Part No.	Description	1	10	100
196171CP	2x8 matrix keypad	$16.95	$15.29	$13.75
152063CP	4x4 matrix keypad	14.95	13.49	11.95
103190CP	Header housing (10-pin)	.42	.39	.36
100765CP	Header pin (10 per pack) .... ✳		.11	.09

12-Button Telephone Keypads

- White plastic
- 8-pin .100" header
- Contact rating: 12VDC @ 20mA
- Contact resistance: 200Ω max.
- Tactile type keypad
- Life test: 1,000,000 cycles per key
- Size: 2.8"L x 2.2"W x 0.6"H

153488CP

Part No.	Description	1	10	100
190561CP	Numeric keypad	$8.75	$6.55	$4.49
153488CP	Alpha numeric keypad	8.95	8.09	7.25

16-Button Numeric Keypad

- 4 x 4 matrix keypad
- 8-position solder pad
- Contact rating: 24VDC @ 20mA
- Contact resistance: 200Ω max.
- Life test: 1,000,000 life cycles per key
- Size: 3.0"L x 2.8"W x 0.6"H

Part No.	Description	1	10	100
169244CP	Numeric keypad	$7.95	$6.95	$6.25

See what's new at Jameco on pages 207-213.

24VDC Liquid Level Sensors

Combine the control box and sensor to activate a water valve. When sensor is triggered by either a tank in full or empty condition, it will trigger an output status change.

176241CP: Control Box
• Input voltage: 24VDC @ 10A
• Output voltage: 24VDC @ 10A
• Size: 2.1"L x 2.1"W x 1.6"H

176241CP

176250CP (Empty) / 176268CP (Full)
• Maximum contact rating: 10W
• Carry current: 1A
• Max. switching voltage: 100VDC
• Max. switching current: 0.5A
• Maximum contact resistance: 100mΩ
• Size: 2.6"L

176250CP

Part No.	Description	1	10	25
176241CP	Control box	$11.75	$10.25	$9.25
176250CP	Sensor empty type	9.95	8.95	7.95
176268CP	Sensor full type	11.45	10.30	9.27

Fujikura -1.1 to 2.5 PSI Pressure Sensor

• Measurable pressure range: -1.1 to 2.5 PSI
• Maximum load pressure: twice of rated pressure
• Operating voltage: 5V @ <10mA
• Maximum excitation voltage: 8V
• Pressure type: gauge pressure • Volt-level output
• Pressure media: non-corrosive gas
• On-chip amplification and temp. compensations
• Pre-calibration of offset voltage and span
• 1/8" diameter tubing is applicable
• Size: .55"L x .47"W x .20"H

Part No.	Product No.	1	10	100
196103CP	XFPN-025-KPGRNW1	$24.95	$18.75	$13.15

Fujikura 0 to 5 PSI Pressure Sensor

• Maximum load pressure: 10 PSI
• Output voltage: 0 – 4.5V
• Operating voltage: 5V @ 10mA
• Pressure type: gauge pressure
• Pressure media: non-corrosive gas
• Accuracy: ±0.125 PSI at 25˚C; ±0.250 PSI at -10 to 65˚C
• High level output, on-chip signal conditioned, temperature compensated, and calibrated
• 1/8" diameter tubing is applicable
• Size: 0.6"L x 0.5"W x 0.2"H

Part No.	Product No.	1	10	100
173657CP	XFPN-050-KPGT1	$15.95	$14.35	$12.95

Servoflo 0 to 7 PSI Pressure Sensor

• Max. load pressure: 10.5 PSI
• Input excitation: 1.5mA
• Span output: 60-140mV
• Bridge resistance: 5kΩ ±1kΩ
• Accuracy: ±5% full scale
• High output, accuracy and stability • Low noise
• 1/8" diameter tubing is applicable
• Size: 0.5"L x 0.5"W x 0.2"H

Top View

Pin Connection Diagram

Part No.	Product No.	1	10	100
163731CP	FPM07PG	$11.95	$8.95	$6.29

12VDC Inductive Proximity Switch Sensors
Cylindrical and Square Styles

HIGHLY

• Operating voltage range: 10-30VDC
• Nominal operating voltage: 12VDC
• Current consumption: 10mA max.
• Switching frequency: 1.5kHz
• Sensing target: inductive type – magnetic metal
• Sensing distance: ±10% (tin)
• Short circuit protected • LED status indicator
• Fast response • 6' long cable • Pre-tinned pigtail

155547CP (17mm)
167020CP (12mm)
155563CP (12mm)
155571CP (18mm)

Part No.	Product No.	Output Circuit	Effec. Dist. (Iron)	Standard Target (Iron) (mm)	Size (L" x W" x H")	Mounting Hole (in.)	1	10	25
155547CP	S1805N1	NPN	0-4.0mm	17 x 17 x 1	1.4 x 1.4 x 0.7	0.112	$9.95	$8.95	$7.95
167020CP	TS1202N1	NPN	0-1.6mm	12 x 12 x 1	1.8"L x 0.46"Dia.	0.46	20.65	18.61	16.75
155563CP	TS1202P1	PNP	0-1.6mm	12 x 12 x 1	1.8"L x 0.46"Dia.	0.46	17.95	16.19	14.55
155571CP	TS1805N1	NPN	0-4.0mm	18 x 18 x 1	1.6"L x 0.70"Dia.	0.70	29.95	22.49	15.75

GORDOS-Type Digital I/O Modules

SALE

184541CP

• Industry standard package and pinout
• High immunity to false operation
• 4000Vrms optical isolation
• Continuous duty
• Color coded by function
• Capacitance: 8pF typical (input/output)

Part No.	Mfr. Cross Ref. No.	Description	Input Voltage	Output Voltage	1	10	50
184541CP	ODC-5	DC output (red)	5VDC	3 to 60VDC @ 3A	$7.29	$6.85	$6.39
184524CP	OAC-5	AC output (black)	5VDC	120VAC @ 3A	8.49	7.65	6.89
184583CP	IDC-5	DC input (white)	3.3 to 32VDC	5VDC	8.49	7.49	6.79

Ultrasonic Sensor Sets

• Use for motion or distance sensing
• Frequency: 40kHz ±1.0kHz
• Aluminum case

136653CP:
Transmit/Receive Set
• Capacitance: 2000pF ±30%
• Case size: 0.47"H x 0.62" Dia.
• Transmitter: bandwidth 4.0kHz/112dB, sound pressure level 119dB/40±1.0kHz
• Lead length/spacing: 0.39"
• Receiver: bandwidth 3.5kHz @ -71dB, min. sensitivity 65dB/40±1.0kHz (0dB vs 1V µbar) R=3.9kΩ

136653CP

139491CP:
Transmit/Receive Set
• Capacitance: 2000pF ±20%
• Lead length/spacing: 0.28"
• Transmitter: bandwidth 5.0kHz/100dB, sound pressure level 112dB/40 ±1.0kHz
• Receiver: bandwidth 5.0kHz @ -75dB, min. sensitivity 67dB/40 ±1.0kHz (0dB vs 1V µbar) R=3.9kΩ
• Case size: 0.30"H x 0.43" Dia.

139491CP

Part No.	Mfr. Cross Ref. No.	1	10	50
136653CP	40TR16F	$6.95	$6.29	$5.65
139491CP	40TR12B	6.95	6.29	5.65

Latched Hall Effect Sensors

169691CP

169691CP

174043CP

• SP (south pole): on; NP (north pole): off
• Supply voltage: 20Vcc

169691CP: Complimentary open collector, output compatible with all digital logic families

Parameters	P/N 174043CP	P/N 169691CP
Supply Current	4mA	25mA
Output Current	20mA	300mA
Max. Operating Point & Max. Release Point (gauss)	≤ 130	≤ 90

Part No.	Mfr. Cross Ref. No.	1	10	100	1000
174043CP	HI-300	$.86	$.77	$.65	$.41
169691CP	HI-400	.89	.81	.72	.65
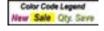
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Color Code Legend
New Sale Qty. Save

General Purpose Relays

Pin Type Terminals
- DPDT • 8-pin

Series 78:
- Contact voltage: 240VAC

Series 250:
- Contact rating: 120/240VAC, 28VDC @ 10A
- Ambient temp. operating: -10°C to +50°C
- Size: 1.4"L x 1.4"W x 2.7"H

139740CP

172718CP

141145CP

155096CP

Series 78 Relay

Part No.	Mfr. Cross Reference No.	P & B Cross Reference	Coil Voltage	1	10	50
172718CP	SCL12DPDT	K10-11D15-R	12VDC	$4.99	$4.49	$3.99

Series 250 Relays

Part No.	Mfr. Cross Reference No.	P & B Cross Reference	Coil Voltage	1	10	50
139766CP	BTA1-2C-12VDC	R02-11D10-12	12VDC	$8.99	$7.99	$7.19
139740CP	BTA1-2C-120VAC	R02-11A10-120	120VAC	9.95	8.79	7.99

Series 250 Sockets

Part No.	Voltage	Current	Pins	Dimensions	1	10	50
141145CP	250VAC	20 amps	8	2.0"L x 1.6"W x 0.8"H	$3.99	$3.65	$3.59
141153CP	250VAC	20 amps	11	2.0"L x 1.7"W x 1.2"H	5.45	5.10	4.49

Relay Type Project Case

Part No.	Cross Ref. No.	No. of Pins	Compatible Socket	1	10	100
155096CP	RC8	8	P/N 141145CP above	$1.25	$1.15	$1.00

SALE

Quick Connect Blade Terminal – Series 388

DPDT **3PDT**

141161CP

Flat terminals (0.187" x 0.020") for standard plug-in mounting; also accepts quick-connect receptacles or direct soldering.
- Contact rating: 120VAC/28VDC @ 13A/240VAC @ 10A
- Ambient temperature operating: -30°C to +50°C
- Size: 1.5"L x 1.4"W x 2.2"H

Part No.	Mfr. Cross Reference No.	P & B Cross Reference	Coil Voltage	Style	Pins	1	10	50
139854CP	BTA2-3C-24VDC	R10-14D10-24	24VDC	3PDT	11	$8.95	$7.75	$6.99

Series 388 Socket

Part No.	Voltage	Pins	Amps	Dimensions	1	10	50
141161CP	250VAC	11	20	3.0"L x 1.4"W x 1.0"H	$3.95	$3.56	$3.20

OMRON G2R Power PCB Relays

186669CP (5-pin) **186731CP (5-pin)** **186829CP (8-pin)** **186757CP (5-pin)**

- Operating frequency: 18,000 operations/hour (mechanical); 1,800 operations/hour (electrical; under rated load)
- Power consumption: approx. 530mW (non-loading DC coil); approx. 0.9 mW (non-loading AC coil)
- Service life: AC – 10,000,000 operations (min.); DC – 20,000,000 operations (min.)
- Contact voltage: 250VAC/30VDC • Contact material: AgCdO
- Insulation resistance: 1,000MΩ (min. @ 500VDC)
- Size: 1.40"L x 0.51"W x 1.00"H; *except G2R-1-T: 1.77"L x 0.55"W x 1.16"H

Part No.	Product No.	Type	Coil Volt.	Coil Res. Ω	Contact Current	1	25	50
186669CP	G2R-14 DC12	Sealed SPDT PCB	12	275	10A	$3.19	$2.75	$2.55
186731CP	G2R-1-S-AC120	SPDT plug-in	120	6500	10A	6.99	6.29	5.59
186829CP	G2R-2-S-AC120	DPDT plug-in	120	6500	5A	6.45	5.79	5.25
186757CP	G2R-1-T-AC120*	SPDT quick-conn.	120	260	10A	6.55	5.90	5.31

Rayex General Purpose Relays

Potter and Brumfield Type LB2 Series
- DPDT • 8-pin
- Contact rating: 240VAC/30VDC @ 12A
- Mechanical life: 10,000,000 operations
- Electrical life: 100,000 operations min. at rated load

175564CP **175572CP**

Part No.	Product No.	P & B Cross Ref.	Coil Voltage	1	10	50	100
172718CP	SCL12DPDT	K10-11D15-12	12VDC	$4.99	$4.49	$3.99	$3.59
175564CP	LB2-24DS	K10-11D15-24	24VDC	5.99	5.49	4.93	4.49
175572CP	LB2-110AS	K10-11A15-120	110VAC	6.25	5.49	4.99	4.39

Rayex LB2 Socket
- DIN rail snap socket for LB2 relays

Part No.	Product No.	P & B Cross Reference	Pins	1	10	50
175530CP	PTF08AA	27E895	8	$5.95	$5.39	$4.85

Rayex LB4H Series
- 4PDT • 14-pin
- Insulation resistance: 1,500MΩ @ 500VDC
- Mechanical life: 10,000,000 operations
- Electrical life: 100,000 operations min. at rated load
- Contact rating: 240VAC/24VDC @ 5A; except P/N 183011CP 220VAC/24VDC @ 5A

175601CP **175610CP**

Part No.	Product No.	P & B Cross Ref.	Coil Voltage	1	10	50	100
183011CP	GM4PDT12DF	KHAU-17D12-12	12VDC	$6.95	$6.38	$6.04	$4.99
175601CP	LB4H-24DS	KHAU-17D12-24	24VDC	4.95	4.45	3.99	3.59
175610CP	LB4H-110AS	KHAU-17A12-120	110VAC	4.25	3.85	3.45	3.25

Rayex LB4H Socket
- DIN rail snap socket for LB4H relays

Part No.	Product No.	P & B Cross Reference	Pins	1	10	50
175556CP	PYF14AA	PYF14AA	14	$3.95	$3.49	$2.95

T9A Series Relay

Low Cost PC Board or Panel Mount Only
- Contact form: SPDT • Coil voltage: 12VDC
- Coil: 155Ω • Contact voltage: 240VAC/28VDC
- Contact current: 20A/10A • 5-pin
- Terminal type: 0.1" disconnect (2); 0.25" disconnect (3)
- Mechanical life expectancy is 10 million operations
- Operating temperature: -55°C to +85°C
- Dielectric strength: 1500VAC (between open contacts)
- Dimensions: 2.0"L x 1.6"W x 1.8"H

1.25" 1.06" 1.97"

Part No.	Product No.	P & B Cross Ref.	1	10	50	100
137357CP	953-IC-12DM	T9AS5D52-12	$2.69	$2.49	$2.29	$1.79

Reed Type Relays
- Dielectric strength: 500VDC (between contact and coil)
- Operating temperature: -35°C to +85°C
- Normally open (NO), normally closed (NC)
- Coil voltage: 12VDC • Terminal type: PCB solder
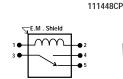
SALE

111448CP:
- Manufacturer: Han Kuk
- Coil (Ohms): 550
- Contact form: SPST
- Contact voltage: 250VAC/150VDC
- Contact current: 0.1A
- Pins: 4

111448CP

168356CP:
- Manufacturer: ELEC-TROL
- Coil (Ohms): 1080
- Contact form: SPDT
- Contact voltage: 28VDC (max.)
- Contact current: 0.25A
- Pins: 5 ✳ 10 pc. minimum

E.M. Shield
1 2
3 4
5

168356CP

Part No.	Product No.	Dimensions	1	10	50	100
111448CP	RC108T	1.0"L x .37"W x .38"H	$.55	$.49	$.45	$.39
168356CP	R8864-2	1.1"L x .35"W x .32"H	✳	.11	.10	.091
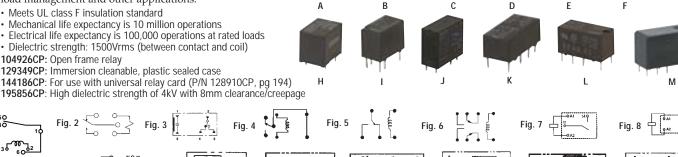
Small High-Current PC Mount Relays

An inexpensive means of switching loads up to 30 amps. While these small, low-cost relays are designed primarily for the appliance industry and the heating, air conditioning and ventilation markets, they are also well suited for automotive load management and other applications.

- Meets UL class F insulation standard
- Mechanical life expectancy is 10 million operations
- Electrical life expectancy is 100,000 operations at rated loads
- Dielectric strength: 1500Vrms (between contact and coil)

104926CP: Open frame relay
129349CP: Immersion cleanable, plastic sealed case
144186CP: For use with universal relay card (P/N 128910CP, pg 194)
195856CP: High dielectric strength of 4kV with 8mm clearance/creepage

A B C D E F G

H I J K L M

Fig. 1 Fig. 2 Fig. 3 Fig. 4 Fig. 5 Fig. 6 Fig. 7 Fig. 8

Fig. 9 Fig. 10 Fig. 11 Fig. 12 Fig. 13 Fig. 14 Fig. 15

Part No.	Mfr. Cross Ref. No.	Potter & Brumfield Cross Reference	Fig.	Contact Form	Coil Voltage	Coil (Ohms)	Contact Voltage	Contact Current	Pins	L x W x H (in.)	Pricing 1	10	50	100
145752CP	T90S1D12-12*	T90S1D12-12	1A	SPST	12VDC	155	240VAC	30A	5	1.2 x 1.0 x .77	$2.99	$2.69	$2.39	$2.15
195864CP	RP838012	—	8F	SPST	12VDC	270	250VAC	12A	4	1.1 x .48 x 1.0	1.65	1.35	.99	.69
192778CP	TN423024	T7NS1D1-24	7C	SPST	24VDC	1600	250VAC/30VDC	7A	4	.82 x .62 x .63	1.05	.92	.84	.76
134949CP	FKD130PSDC5V	T90S5D12-5	1A	SPDT	5VDC	27	240VAC/28VDC	20A	6	1.3 x 1.1 x .80	2.49	2.15	1.93	1.65
174449CP	LU-5	T81H5D215	4C	SPDT	5VDC	125	120VAC/24VDC	1A/2A	6	.60 x .40 x .45	1.89	1.75	1.63	1.55
187151CP	G5LE-1DC5	—	10H	SPDT	5VDC	63	120VAC/30VDC	10A/8A	5	.90 x .65 x .75	1.59	1.37	1.25	1.25
187240CP	G5V-1-DC5	—	11I	SPDT	5VDC	166.7	125VAC/24VDC	.5A/1A	6	.50 x .30 x .40	2.15	1.88	1.65	1.65
104926CP	733SPDT12VDC*	T90N5D12-12	1E	SPDT	12VDC	155	240VAC/28VDC	20A/10A	6	1.2 x .90 x .63	2.49	2.24	2.01	1.81
129349CP	832-IC-S	T90S5D12-12	1A	SPDT	12VDC	155	277VAC/28VDC	20A/10A	6	1.2 x 1.0 x .75	2.25	1.99	1.79	1.46
174393CP	LM1-12D	RKA5DG12	5D	SPDT	12VDC	270	250VAC/30VDC	10A	5	1.2 x .48 x 1.0	1.45	1.35	1.19	1.09
186669CP	G2R-14-DC12	—	12J	SPDT	12VDC	275	250VAC/30VDC	10A	5	1.2 x 1.0 x .51	3.19	2.75	2.55	2.35
172937CP	JS1-12V	T72M5D121-12	9G	SPDT	12VDC	400	125VAC/24VDC	10A/5A	5	.85 x .62 x .63	1.15	1.09	.95	.79
144186CP	JZC-22F	VR15M121C	2C	SPDT	12VDC	337	120VAC/28VDC	15A	5	.80 x .64 x .80	3.25	2.92	2.63	2.36
187160CP	G5LE-14DC12	T7CS5D-12	10H	SPDT	12VDC	360	120VAC/30VDC	10A/8A	5	.90 x .65 x .75	1.79	1.61	1.45	1.30
174431CP	LEG12F	T7CS5D12	2C	SPDT	12VDC	400	120VAC/24VDC	15A	5	.76 x .62 x .60	1.49	1.29	1.19	1.09
195856CP	G6R-1-DC12	—	3B	SPDT	12VDC	650	250VAC	8A	5	1.2 x .39 x .57	3.95	3.19	2.39	1.69
184461CP	G5V-1-DC12	—	11I	SPDT	12VDC	960	125VAC/24VDC	.5A/1A	6	.50 x .30 x .40	2.35	1.88	1.66	1.49
187282CP	G6A-234PSTUSDC5	—	13K	DPDT	5VDC	125	125VAC/30VDC	.3A/1A	8	.80 x .40 x .33	4.35	3.77	3.39	2.99
174377CP	LM2-12D	RKA5DZ12	6D	DPDT	12VDC	270	250VAC/30VDC	5A	8	1.2 x .48 x 1.0	2.49	2.25	1.95	1.75
187258CP	G5V-2-DC12	—	14L	DPDT	12VDC	288	125VAC/30VDC	.5A/2A	8	.81 x .40 x .45	2.68	2.41	2.17	1.95
186941CP	G2RL-2A-DC12	—	15M	DPDT	12VDC	360	250VAC/30VDC	8A	8	1.2 x .50 x .62	3.99	3.59	3.19	2.89
184452CP	G5V2-DC24	—	14L	DPDT	24VDC	1152	125VAC/30VDC	.5A/2A	8	.81 x .40 x .45	2.49	1.99	1.49	.99
200740CP	G5V-2-HIDC24	—	14L	DPDT	24VDC	1152	125VAC/30VDC	.5A/2A	8	.81 x .40 x .45	2.59	2.09	1.55	1.09

*Manufacturer may vary

Potter & Brumfield Type Plastic Enclosed Construction Relays

VF4 Type
- Dielectric strength: 500VDC (between contact & coil)
- Operating temperature: -35°C to +85°C
- Contact current: 40A
- Coil voltage: 12VDC except P/N 171521CP (5VDC)
- Normally open (NO), normally closed (NC)
- Terminal type: quick connect
- Dimensions: 1.1"L x 1.1"W x 1.0"H

Schematic 1

Schematic 2

171432CP (Fig. 1) 171441CP (Fig. 2) 171459CP (Fig. 3)

Part No.	Mfr. Cross Ref. No.	P&B Cross Reference	Fig.	Contact Form	Coil Ohms	Contact Schematic	Contact Voltage	Pins	Pricing 1	10	50	100
171459CP	LD1A-12F	VF481F11S01	3	SPST-NO	78	2	14VDC	4	$1.89	$1.55	$1.15	$.99
171441CP	961A-1A12D	VF411F11	2	SPST-NO	90	2	14VDC	4	2.49	2.39	2.29	2.19
171432CP	961A-1C-12DM	VF481F11	1	SPDT	90	1	12VDC	5	2.99	2.39	1.79	1.29
171521CP	LD5F	VF445D11	1	SPDT	14	1	12VDC	5	1.95	1.59	1.29	1.09
148582CP	LD12F	VF485F11	1	SPDT	78	1	12VDC	5	2.49	2.25	1.95	1.75

Relay Socket with Coil Diode

VF4 Type
- For use with P/N 148582CP, left
- 12 AWG: 2 black & 1 blue wire
- 18 AWG: 1 black & 1 red wire
- Contact voltage/current: 12V/20A
- Diode coil suppression • 7.5" wire

Part No.	Ref. No.	1	10	50	100
170624CP	RSDO3	$2.35	$1.89	$1.45	$.99

5-Pin Relay Socket

VF4 Type
- For use with VF4 relays above
- Accomodates 18-20 AWG wire

Part No.	Ref. No.	1	10	50	100
171416CP	VCF41002	$.45	$.39	$.35	$.30

DC/AC and DC/DC Solid State Relays

- Screw terminal with hardware
- Photo isolation
- Metal mounting base
- Manufacturer may vary

176698CP (Fig. 1) **153058CP (Fig. 2)** **192815CP (Fig. 3)** **162341CP (Fig. 4)** **176735CP (Fig.5)**

SALE

173518CP (Fig.6) **187004CP (Fig.7)** **187063CP (Fig.8)** **164996CP (Fig.9)** **127790CP (Fig.10)**

Part No.	Product No.	Mfr.	Control Voltage	Type	Contact Style	Contact Voltage	Contact Current	Pins	Fig.	Terminal Type	Agency Approval	Size L" x W" x H"	Pricing 1	10	50	100
Solid State Relays DC/AC Type																
153058CP	KSD203AC2	COSMO	4-32VDC	DC/AC	SPST	240VAC	3A	4	2	Solder Lead	—	1.4 x 0.3 x 0.9	$10.95	$9.89	$8.89	$7.99
139053CP	240D25	OPTO 22	3-32VDC	DC/AC	SPST	240VAC	25A	4	3	Screw Terminal	UL/CSA	2.3 x 1.7 x 1.0	21.95	19.79	17.79	16.05
162341CP	ESR51024-010 †	Excel	3-32VDC	DC/AC	SPST	240VAC	10A	4	4	Screw Terminal	UL	2.3 x 1.7 x 1.1	15.95	14.39	12.95	11.65
162368CP	ESR51024-025 †	Excel	3-32VDC	DC/AC	SPST	240VAC	25A	4	4	Screw Terminal	UL	2.3 x 1.7 x 1.1	21.95	19.79	17.79	16.05
162405CP	ESR51024-040 †	Excel	3-32VDC	DC/AC	SPST	240VAC	40A	4	4	Screw Terminal	UL	2.3 x 1.7 x 1.1	22.99	20.69	18.69	16.79
105081CP	615-8500	Teledyne	3-32VDC	DC/AC	SPST	250VAC	10A	4	3	Screw Terminal	UL	2.3 x 1.7 x 1.1	15.99	14.39	12.99	11.69
192815CP	KSD240AC8	COSMO	4-32VDC	DC/AC	SPST	250VAC	40A	4	3	Screw Terminal	—	2.3 x 1.8 x 0.6	22.95	19.95	17.95	15.95
175214CP	KB20C02A	Kyoto	3-32VDC	DC/AC	SPST	280VAC	2A	4	1	Solder Lead	—	1.4 x 0.3 x 1.5	6.49	5.69	5.15	4.65
127790CP	D2W202F	Crydom	3-32VDC	DC/AC	SPST	280VAC	2A	4	10	Solder Lead	UL/CSA	1.7 x 0.4 x 1.3	6.25	5.75	5.45	5.45
173518CP	RLYB4280	Phillips	3-32VDC	DC/AC	SPST	280VAC	4A	4	6	Solder Lead	—	1.7 x 0.4 x 1.5	9.95	8.95	7.99	7.25
176698CP	KB20C06A	Kyoto	3-32VDC	DC/AC	SPST	280VAC	6A	4	1	Solder Lead	—	1.4 x 0.3 x 0.9	9.99	8.99	7.99	7.19
176719CP	KD20C40AX	Kyoto	3-32VDC	DC/AC	SPST	280VAC	40A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	19.99	17.99	16.19	14.59
176727CP	KD20C50AX	Kyoto	3-32VDC	DC/AC	SPST	280VAC	50A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	24.99	22.49	22.49	22.49
176735CP	KD20C75AX	Kyoto	3-32VDC	DC/AC	SPST	280VAC	75A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	39.95	35.99	32.39	29.15
204441CP	TD2420Q	Crydom	4-15VDC	DC/AC	4PST	280VAC	20A	13	–	Solder Lead	UL/CSA	2.3 x 1.8 x 0.9	56.95	42.75	29.95	29.95
186992CP	G3NA-210B-DC5-24	Omron	5-24VDC	DC/AC	—	240VAC	10A	4	7	Screw Terminal	UL/CSA	2.3 x 1.7 x 1.1	14.29	13.55	12.89	12.25
187004CP	G3NA-220B-DC5-24	Omron	5-24VDC	DC/AC	—	240VAC	20A	4	7	Screw Terminal	UL/CSA	2.3 x 1.7 x 1.1	19.95	17.95	15.95	13.95
187063CP	G3NE-205T-USDC5	Omron	5VDC	DC/AC	—	100/240VAC	5A	5	8	Solderless Terminal	UL/CSA/TUV	1.9 x 1.5 x 0.5	10.95	9.75	8.79	8.79
164988CP	S101S02	Sharp	3-32VDC	DC/AC	—	125VAC	1.5A	4	9	Solder Lead	UL/CSA	0.9 x .16 x .63	3.95	3.49	2.95	2.25
164996CP	S202TA1	Sharp	3-32VDC	DC/AC	—	265VAC	2.5A	4	9	Solder Lead	UL/CSA	0.9 x .16 x .63	5.45	4.95	4.39	3.95
Solid State Relay DC/DC Type																
172591CP	KF0602D	Kyoto	3-32VDC	DC/DC	SPST	60VDC	2A	4	1	Solder Lead	—	1.4 x 0.3 x 0.9	$9.95	$8.95	$7.95	$6.95
175222CP	KF0604D	Kyoto	3-32VDC	DC/DC	SPST	60VDC	4A	4	1	Solder Lead	—	1.5 x 0.3 x 0.9	11.95	11.25	10.25	9.22
176647CP	KG1005D	Kyoto	3-32VDC	DC/DC	SPST	120VDC	5A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	26.99	24.29	21.79	19.59
176655CP	KG1010D	Kyoto	3-32VDC	DC/DC	SPST	120VDC	10A	4	5	Screw Terminal	—	2.3 x 1.7 x 0.9	29.99	26.99	24.29	21.89

† Zero crossing

DIP Relays

- Logic control levels
- Moisture resistant
- Compatible with IC sockets
- Long life with reliable operation
- Compact design/construction
- Excellent for PCB applications

FUJITSU **Aromat** **CLARE** **EGE**

106462CP **129875CP** **99901CP** **136549CP**
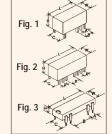
Schematic 1 **Schematic 2** **Schematic 3** **Schematic 4** **Schematic 5** **Schematic 6**

Fig. 1 **Fig. 2** **Fig. 3**

Part No.	Mfr. Cross Reference No.	Manufacturer	Contact Schem.	Contact Form	Coil Voltage	Coil Ohms	Contact Voltage	Contact Current	Pins	Jameco Socket	Fig.	Size L x W x H (in.)	Leads A x B x C (in.)	Pricing 1	10	50	100
106462CP	201A05	Excel Cell Elect.	1	SPST-NO	5VDC	500	100VDC	0.5A	8	37161	3	.78 x .25 x .20	.10 x .40 x .30	$2.25	$1.91	$1.60	$1.29
138430CP	2D1A05	Excel Cell Elect.	2	SPST-NO	5VDC	500	100VDC	0.5A	8	37161	3	.77 x .30 x .22	.10 x .40 x .30	2.29	1.95	1.65	1.34
106471CP	201A12	Excel Cell Elect.	1	SPST-NO	12VDC	1000	100VDC	0.5A	8	37161	3	.78 x .25 x .20	.10 x .40 x .30	2.49	2.10	1.77	1.45
138448CP	2D1A1200	Excel Cell Elect.	2	SPST-NO	12VDC	1000	100VDC	0.5A	8	37161	3	.77 x .30 x .22	.10 x .40 x .30	2.25	1.95	1.75	1.49
192760CP	5MBU-5	Fujitsu	6	DPST-NO	5VDC	35	240VAC/24VDC	5A	8	—	1	1.13 x .50 x .98	.17 x .76 x .28	1.95	1.55	1.19	.83
138456CP	202A05	Excel Cell Elect.	3	DPST-NO	5VDC	140	100VDC	0.5A	8	37161	3	.77 x .30 x .28	.10 x .40 x .30	3.49	3.15	2.69	2.19
129875CP	DS2EMDC5V*	NEC (MR62-5)	4	DPDT	5VDC	62.5	125VAC/30VDC	.6A/1A	8	37372	1	.79 x .40 x .39	.20 x .40 x .30	2.99	2.77	2.45	2.09
173913CP	AZ831-2C-5DSE	American Zettler	4	DPDT	5VDC	125	125VAC/100VDC	.5A/1.25A	8	37401	1	.79 x .38 x .44	.18 x .28 x .29	2.35	1.89	1.45	.99
139977CP	RSB5S	Shin Mei	4	DPDT	5VDC	125	120VAC/30VDC	1A/2A	8	37372	1	.79 x .39 x .37	.20 x .40 x .30	2.49	2.25	1.95	1.75
99338CP	LM12C00	Clare	4	DPDT	6VDC	71	125VAC/100VDC	2A	8	37338	1	.79 x .40 x .43	.20 x .40 x .30	2.75	2.49	2.25	2.05
99311CP	DS2Y-S-DC12V*	Aromat (NAIS)	4	DPDT	12VDC	720	110VAC/40VDC	.3A/1A	8	37372	1	.79 x .40 x .43	.20 x .40 x .30	2.49	2.31	2.05	1.75
99901CP	LX200D00	Clare	4	DPDT	12VDC	720	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .30	.20 x .40 x .30	6.95	6.25	5.63	4.49
99320CP	LM12E00*	NEC	4	DPDT	24VDC	1110	125VAC/100VDC	2A	8	37372	1	.79 x .40 x .43	.20 x .40 x .30	2.95	2.69	2.39	2.15
136549CP	DS4E-M-DC5V*	Aromat	5	4PDT	5VDC	62.5	125VAC/30VDC	.6A/2A	14	112299	2	1.40 x .40 x .36	.20 x .30 x .30	5.95	5.39	4.85	4.35
176313CP	DS4E-M-DC12V	Aromat	5	4PDT	12VDC	360	125VAC/30VDC	.6A/2A	14	112299	2	1.40 x .40 x .36	.20 x .30 x .30	7.95	7.15	6.45	5.79
206543CP	DS4E-S-DC5V-1C-N137	Aromat	6	4PDT	5VDC	125	250VAC/220VDC	2A	14	112299	2	1.40 x .40 x .42	.20 x .30 x .30	8.95	7.95	7.15	6.49

*Manufacturer may vary

135394CP – Electrolytic **135271CP** – LEDs **169578CP** – Photocells **18294CP** – Toy Motors **149649CP** – Fans **55968CP** – Spacers **81701CP** – Cabinet

* LB grab bag quantities are approximate • Opened grab bags are not returnable • Use our 20-drawer cabinet w/ labels to store your components, P/N 81701CP, pg

Shaded in purple on this page you will find Jameco's nine most popular component Grab Bags. They are all individually bagged, and are combined to make up the Schwab's School Selection (P/N 163213CP) referenced towards the bottom of the page.

Capacitors

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
17857CP	GB100	200 asst. ceramic disc capacitors	0.2 ..	$4.95	$4.49
135335CP	GB100LB*	1 lb. (813 pcs) asst. ceramic disc caps.	1.0 ..	12.95	11.49
17881CP	GB101	100 assorted mylar capacitors	0.3	5.95	5.35
135458CP	GB101LB*	1 lb. (440 pcs) asst. mylar capacitors	1.0 ..	14.95	13.49
17911CP	GB102	100 assorted electrolytic capacitors radial, axial, snap	0.5	4.95	4.49
135394CP	GB102LB*	1.5 lb. assorted (300 pcs) electrolytic caps. radial, axial, snap (photo above)	1.5 ..	12.95	11.49
17945CP	GB103	100 assorted tantalum capacitors (dipped epoxy and solid tubular)	0.1	9.95	8.95

Diodes, Transistors and Crystals/Oscillators

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
17961CP	GB107	200 assorted diodes (zener, switching, silicon)	0.1 ...	$5.95	$5.35	$4.79
18171CP	GB127	100 assorted transistors (NPN, PNP, power)	0.1	5.95	5.35	4.79
114446CP	GB150	50 assorted crystals/oscillators	0.2	7.95	6.95	6.25

Trimmer and Single-Turn Potentiometers

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18075CP	GB113	100 asst. 1/10W to 1/8W trimmer pots (100Ω to 2MΩ values)	0.1 ..	$6.95	$6.25
18278CP	GB174	100 assorted 1/4W & 1/2W single turn pots (100Ω to 5MΩ assorted values)	0.2	6.95	6.25
135407CP	GB174LB*	1 lb. (295 pcs) 1/4W & 1/2W single turn pots (100Ω to 5MΩ assorted values)	1.0 ..	15.95	14.39

Integrated Circuits and Sockets

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
17996CP	GB108	100 assorted 7400, 74LS00 series (74, 74C, 74F, 74S, 74ALS, 74HC, 74HCT)	0.2 ..	$6.95	$6.25
135280CP	GB108LB*	1 lb. (400 pcs) asst. 7400, 74LS00 series (74, 74C, 74F, 74S, 74ALS, 74HC, 74HCT)	1.0 ..	16.95	14.95
18024CP	GB109	100 asst. linear series (LM300, 500, 700, 7800, 7900 reg.) DIP, TO-3, TO-220	0.6	7.95	6.95
145242CP	GB109LB*	2 lb. (300 pcs) asst. linear series (LM300, 500, 700, 7800, 7900 reg.)	2.0 ..	16.95	14.95
114964CP	GB171	100 asst. microprocessor series (micros, PALS, RAMs, PROMS, EPROMs)	0.7	7.95	6.95
105620CP	GB120	100 asst. IC sockets (DIP IC, PGA, TO-3)	0.3	5.95	5.35
135386CP	GB120LB*	1 lb. (260 pcs) assorted IC sockets (DIP IC, PGA, TO-3)	1.0 ..	12.95	11.49

Surprise Computer Products Grab Bag

Best Bargain!

Various electronic components (capacitors, connectors, sockets, LEDs, resistors, diodes, ICs, transistors, pots, oscillators/resonators, inductors, crystals,switches), cables, power supply, transformer, fan, PC board, keyboard, misc. computer products.

SALE

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18331CP	GB190	Component/computer grab bag	20.0	$17.95	$15.95

LEDs and Displays

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
18041CP	GB110	100 assorted sizes & colored LEDs (T1/T1$\frac{3}{4}$ round and rectangular)	0.1 ..	$6.95	$6.29	$5.65
18323CP	GB186	500 asst. sizes #18041CP LEDs	0.3 ..	19.95	17.95	15.95
135271CP	GB110LB*	1 lb. (1900 pcs) asst. #18041CP LEDs	1.0 ..	44.95	40.95	38.95
18201CP	GB162	50 asst. sizes of colored displays (7-segment LED, modules, stick)	0.5	9.95	8.95	7.95

1/4W, 1/2W Resistors and Photocells

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18104CP	GB116	200 asst. 1/4W resistors (5/10%)	0.1 ...	$5.49	$4.95
135351CP	GB116LB*	1 lb. (2000 pcs) asst. 1/4W resistors	1.0 ..	14.95	13.49
18139CP	GB117	200 asst. 1/2W resistors (5/10%)	0.2	5.95	5.35
169578CP	GB125	100 asst. sizes & values photocells	0.2	12.95	11.49

Switches, Toy Motors and Fans

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
18235CP	GB165	50 assorted switches (toggle, push button, rocker, slide)	0.4 ...	$8.75	$7.69
135378CP	GB165LB*	1 lb. (135 pcs) asst. #18235CP switches	1.0 ..	18.95	16.95
18294CP	GB182	5 asst. toy DC motors (1.5–24V)	1.1	5.49	4.95
149649CP	GB193	5 asst. AC/DC fans (photo above)	4.5	8.75	7.69

Hardware Assortments

• 2-56 • 4-40 • 6-32 • 8-32 • Screws • Plastic
• Nuts • Washers • Steel • Brass • Lock Washers • Aluminum

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
171571CP	GB149*	1 lb. (500 pcs) asst. types of screws, nuts, washers & lock washers	1.0	$5.95	$5.35	$4.79
171635CP	GB149LB*	3 lbs. (1400 pcs) asst. types; same as P/N 171571CP (above)	3.0	12.95	11.49	9.95

Spacers and Standoffs Assortments

• Round • Hex • Aluminum • Brass • Steel • Plastic • Nylon

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
166481CP	GB440	100 asst. 4-40 spacers/standoffs	0.5 ..	$6.95	$6.25	$5.59
166490CP	GB632	100 asst. 6-32 spacers/standoffs	0.5	6.95	6.25	5.59
55968CP	GB140	100 asst. 4-40, 6-32, 8-32 round/ hex, alum/brass/nylon spacers	0.3	7.95	6.95	6.25
135423CP	GB140LB*	1 lb. (310 pcs) same as P/N 55968CP	1.0 ..	17.95	15.95	13.95

Schwab's School Selection

$56.63 Value

Jameco's nine most popular Grab Bags (highlighted on this page) are all individually bagged. North Dakota Engineer, Loren Schwab, recommended this selection of products as a standard item. He also recommended a 20-drawer component cabinet with labels (81701CP photo above) for storage. **What's your suggestion?**

Includes: Ceramic and electrolytic capacitors, diodes, transistors, potentiometers, switches, LEDs, 1/4W resistors, spacers and standoffs.

Part No.	Cross Ref. No.	Description	Wt. (lbs.)	1	10
163213CP	GB197	Schwab's School Selection	3.3	$39.95	$34.95
81701CP	CAB20	20-drawer component cabinet	4.7	15.95	13.95

Surprise Component Grab Bag

Our Best Seller!

Axial and radial electrolytics, monolithic, dipped silver mica and mylar capacitors, connectors, sockets, thermistors, LEDs, resistor networks, diodes, ICs, standoffs, transistors, oscillator/resonators, inductors, crystals, resistors, pots and switches (1075 pcs).

Part No.	Cross Ref. No.	Description	1	10	25
135263CP	GB191LB*	3 lbs. electronic components	$17.95	$15.95	$13.95

Kits include the Most Popular Components and a Cabinet with extra drawers for your Customized Expansion

20-drawer component cabinet with every kit!

84970CP (IC kit)

84996CP (LED Kit)

81832CP (Resistor kit)

Need a refill? Just call 1•800•831•4242

Each Kit includes a 20-Drawer Component Cabinet (81701CP), 20 clear plastic drawers (85454CP), 20 clear dividers (85446CP), 30 adhesive labels for drawers to identify parts in kit, and all the Electronic Components listed in each kit.

• Cabinet size: 6.0"L x 15.0"W x 7.9"H • Drawer size: 5.5"L x 2.7"W x 1.5"H • Weight: 4.6–6.4 lbs. • Cabinet: ABS-Black • Cabinet is wall-mountable or free standing

Each Refill Package includes all Electronic Components listed in each kit; each type is separately packaged.

7400 Series IC Kit

SAVE $48

Includes 350 pcs. (30 types) 7400 (TTL) Integrated Circuits

10 each	10 each	10 each	10 each	10 each	20 each
7402	7416	7438	74107	74157	7400
7405	7417	7447	74123	74160	7404
7408	7420	7470	74132	74174	7406
7410	7430	7485	74151	74175	7407
7414	7432	7495	74153	74279	7474

Part No.	Description	Wt. (lbs.)	1	10
84953CP	350 pcs. 7400 IC kit	6.2	$139.95	$125.95

74LS Series IC Kit

SAVE $30

Includes 420 pcs. (35 types) 74LS (TTL) Integrated Circuits

10 each	10 each	10 each	10 each	20 each
74LS05	74LS73	74LS125	74LS193	74LS00
74LS10	74LS75	74LS139	74LS240	74LS02
74LS11	74LS85	74LS151	74LS244	74LS04
74LS14	74LS86	74LS155	74LS245	74LS08
74LS20	74LS90	74LS157	74LS273	74LS32
74LS30	74LS93	74LS174	74LS373	74LS74
74LS47	74LS123	74LS175	74LS374	74LS138

Part No.	Description	Wt. (lbs.)	1	10
84961CP	420 pcs. 74LS IC kit	6.7	$119.99	$107.99
130391CP	Refill for 84961CP (420 pcs.)	2.0	99.99	89.99

4000 Series CMOS IC Kit

SAVE $32

Includes 300 pcs. (25 types) CD4000 Series Integrated Circuits

10 each	10 each	10 each	10 each	20 each
CD4015	CD4024	CD4051	CD4093	CD4001
CD4016	CD4027	CD4069	CD4511	CD4011
CD4017	CD4040	CD4070	CD4538	CD4013
CD4020	CD4046	CD4071	CD4543	CD4049
CD4023	CD4050	CD4081	CD4584	CD4066

Part No.	Description	Wt. (lbs.)	1	10
84970CP	300 pcs. 4000 series CMOS IC kit	6.1	$79.95	$71.95
130403CP	Refill for 84970CP (300 pcs.)	1.4	58.95	52.95

Linear Series IC Kit

SAVE $41

Includes 480 pcs. (40 types) Linear Series Integrated Circuits

10 each	10 each	10 each	10 each	20 each
TL072CP	LM337T	LF412CN	ULN2803A	LM317T
TL074CN	LF353N	LMC555CN	NE5532	LM324N
TL082CP	LF356N	LM556N	7808T	LM339N
TL084CN	LM358N	LM723CN	78L12	LM741CN
MAX232CPE	LM386N-1	LM1458N	7815T	LM555CN
LM301N	LM386N-3	LM1488N	7905T	7805T
LM308N	LM393N	LM1489N	7912T	78L05
LM311N	LF411CN	ULN2003A	7915T	7812T

Part No.	Description	Wt. (lbs.)	1	10
84988CP	480 pcs. Linear IC kit	6.0	$189.95	$169.95
130411CP	Refill for 84988CP (480 pcs.)	1.3	179.99	159.99

Low Profile IC Socket Kit

SALE SAVE $18

Includes 300 pcs. (10 types) Solder tail (Tin) IC Sockets

10 each	20 each	20 each	50 each	50 each
22LP	18LP	28LP	8LP	16LP
24SLP	24LP	40LP	14LP	20LP

Part No.	Description	Wt. (lbs.)	1	10
85075CP	300 pcs. LP IC Socket kit	5.5	$31.95	$27.95

LEDs & LED Mounting Hardware Kit

SAVE $39

See pages 90 & 92 for photos and specs.

Includes 560 pcs. (20 types) LEDs and mounting hardware

10 each	10 each	10 each	10 each	100 each
LVG2043	HPQLMPD141	LSG2040	LG3330	LMH100
LH2043	CLF280CTP	LY2040	LY3330	LMH200
LT0333-41	LTL-425B	LA93B/G-1	LFH3360	LR2040
LG3333	LHG3392	LA93B/H-1	LEG3362	LR3330

Part No.	Description	Wt. (lbs.)	1	10
84996CP	560 pcs. LED & Hardware kit	5.0	$59.95	$49.95

1/8-Watt Carbon Film Resistor Kit

SALE

Includes 540 pcs. (30 values) 1/8-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.5kΩ	3.3kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	2Ω	5.1kΩ	22kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2.2kΩ	5.6kΩ	27kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.7kΩ	6.8kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
108329CP	540 pcs. 1/8-watt Resistor kit	4.9	$24.95	$22.49
108302CP	Refill for 108329CP (540 pcs.)	0.2	12.95	11.49

1/4-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/4-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.2kΩ	2.7kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	1.5kΩ	3.3kΩ	20kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2kΩ	5.1kΩ	22kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.2kΩ	5.6kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
81832CP	540 pcs. 1/4-watt Resistor kit	4.9	$27.95	$24.95
103165CP	Refill for 81832CP (540 pcs.)	0.2	12.95	11.49

1/2-Watt Carbon Film Resistor Kit

Includes 540 pcs. (30 values) 1/2-watt 5% Resistors

10 each	10 each	10 each	10 each	10 each	10 each	50 each	50 each
10Ω	330Ω	1.5kΩ	3.3kΩ	15kΩ	47kΩ	100Ω	4.7kΩ
47Ω	390Ω	2kΩ	5.1kΩ	22kΩ	470kΩ	220Ω	10kΩ
150Ω	470Ω	2.2kΩ	5.6kΩ	27kΩ	1MΩ	1kΩ	100kΩ
270Ω	680Ω	2.7kΩ	6.8kΩ	33kΩ	10MΩ		

Part No.	Description	Wt. (lbs.)	1	10
107879CP	540 pcs. 1/2-watt Resistor kit	5.1	$29.95	$26.95
107852CP	Refill for 107879CP (540 pcs.)	0.4	14.95	13.49

Kits include the Most Popular Components and a Cabinet with extra drawers for your Customized Expansion

Each Kit includes a 20-Drawer Component Cabinet (81701CP), 20 clear plastic drawers (85454CP), 20 clear dividers (85446CP), 30 adhesive labels for drawers to identify parts in kit, and all the Electronic Components listed in each kit.

- Cabinet size: 6.0"L x 15.0"W x 7.9"H
- Cabinet: ABS-Black
- Drawer size: 5.5"L x 2.7"W x 1.5"H
- Weight: 4.6 to 6.4 lbs.
- Cabinet is wall-mountable or free standing

20-drawer component cabinet with every kit!

Each Refill Package includes all Electronic Components listed in each kit; each type is separately packaged.

Need a refill? Just call 1•800•831•4242

81875CP (Capacitor Kit)

108433CP (Hardware Kit)

1/2-Watt Single Turn Cermet Pot Kit
SAVE $14

See page 86 (63P Series) for photos and specs.
Includes 100 pcs. (10 values) 1/2-watt Linear Taper Potentiometer

10 each	10 each	10 each	10 each	10 each
63P500Ω	63P5kΩ	63P500kΩ	63P1kΩ	63P50kΩ
63P2kΩ	63P20kΩ	63P1MΩ	63P10kΩ	63P100kΩ

Part No.	Description	Wt. (lbs.)	1	10
85032CP	100 pcs. single turn Pot kit	4.9	$65.95	$58.95

3/4-Watt 15 Turn Cermet Pot Kit
SAVE $24

See page 86 (43P Series) for photos and specs.
Includes 100 pcs. (10 values) 3/4-watt Linear Taper Potentiometer

10 each	10 each	10 each	10 each	10 each
43P500Ω	43P5kΩ	43P500kΩ	43P1kΩ	43P50kΩ
43P2kΩ	43P20kΩ	43P1MΩ	43P10kΩ	43P100kΩ

Part No.	Description	Wt. (lbs.)	1	10
85041CP	100 pcs. 15 turn Pot kit	4.9	$87.95	$78.95

Switch Assortment Kit
SAVE $52

See pages 96, 97, 99 & 100 for photos and specs.
Includes 150 pcs. (15 types) Pushbutton, Slide, Dip & Toggle Switches

10 each	10 each	10 each	10 each	10 each
206-4	JMT121	JMT223	MPC221	MS103
206-8	JMT123	MPC121	MPC223	SDTX620K
JMT113	JMT221	MPC123	MS102	SW153

Part No.	Description	Wt. (lbs.)	1	10
85059CP	150 pcs. Switch kit	5.0	$98.95	$88.95

Hardware and Spacer Assortment Kit
SAVE $33

Includes 2300 pcs. (23 types) Spacers, Nuts, Flat, Tooth & Lock Washers and Slotted PH Screws

100 each Spacers	100 each Hex nuts	100 each Flat	100 each Int. tooth	100 each Split lock	100 each PH machine screws
—	2-56	—	—	#2	2-56 x 1/4, —
4-40	4-40	#4	#4	#4	4-40 x 1/4, 1/2
6-32	6-32	#6	#6	#6	6-32 x 1/4, 1/2
8-32	8-32	#8	#8	#8	8-32 x 1/2, —

Part No.	Description	Wt. (lbs.)	1	10
108433CP	2300 pcs. Hardware kit	7.5	$59.95	$53.95
130497CP	Refill for 108433CP (2300 pcs.)	2.7	39.95	35.95

Ceramic Disc Capacitor Kit
SAVE $18

Includes 520 pcs. (10 values) 50V ±20% Ceramic Disc Capacitors

20 each	20 each	20 each	100 each	100 each
10pF	47pF	470pF	.022µF	.01µF
22pF	100pF	.001µF	.047µF	.1µF

Part No.	Description	Wt. (lbs.)	1	10
81859CP	520 pcs. Ceramic Capacitor kit	5.0	$32.95	$29.95
130232CP	Refill for 81859CP (520 pcs.)	0.3	17.95	16.49

Monolithic Ceramic Capacitor Kit
SAVE $6

Includes 280 pcs. (10 types) 50V ±20% Monolithic Ceramic Capacitors

10 each	10 each	10 each	10 each	100 each
22pF	.001µF	.047µF	.47µF	.01µF
100pF	.0022µF	.22µF	1µF	.1µF

Part No.	Description	Wt. (lbs.)	1	10
171475CP	280 pcs. Monolithic Cap kit	5.0	$34.99	$31.49
171483CP	Refill for 171475CP (280 pcs.)	0.3	17.95	15.95

Radial Electrolytic Capacitor Kit
SAVE $10

Includes 240 pcs. (15 values) ±20% Radial Electrolytic Capacitors

10 each	10 each	20 each	20 each	20 each
100µF @ 50V	1000µF @ 16V	1µF @ 50V	3.3µF @ 50V	22µF @ 50V
220µF @ 25V	2200µF @ 25V	1µF @ 100V	4.7µF @ 50V	47µF @ 50V
470µF @ 25V	3300µF @ 25V	2.2µF @ 50V	10µF @ 50V	100µF @ 25V

Part No.	Description	Wt. (lbs.)	1	10
81867CP	240 pcs. Radial Cap. kit	5.3	$32.95	$29.95
130331CP	Refill for 81867CP (240 pcs.)	0.5	17.95	16.49

Axial Electrolytic Capacitor Kit
SAVE $13

Includes 140 pcs. (10 values) ±20% Axial Electrolytic Capacitors

10 each	10 each	10 each	20 each	20 each
47µF @ 50V	220µF @ 50V	1000µF @ 25V	1µF @ 50V	10µF @ 50V
100µF @ 50V	470µF @ 50V	2200µF @ 16V	4.7µF @ 50V	2.2µF @ 50V

Part No.	Description	Wt. (lbs.)	1	10
81875CP	140 pcs. Axial Capacitor kit	5.3	$39.99	$35.99
130340CP	Refill for 81875CP (140 pcs.)	0.6	24.95	22.49

Mylar Capacitor Kit
SAVE $10

Includes 280 pcs. (10 values) 100V ±10% Mylar Capacitors

10 each	10 each	10 each	10 each	100 each
.001µF	.022µF	.047µF	.47µF	.01µF
.0047µF	.033µF	.22µF	1µF	.1µF

Part No.	Description	Wt. (lbs.)	1	10
81883CP	280 pcs. Mylar Capacitor kit	5.1	$39.99	$35.99
130358CP	Refill for 81883CP (280 pcs.)	0.3	19.95	17.95

Dipped Tantalum Capacitor Kit
SAVE $50

Includes 150 pcs. (15 values) ±20% Dipped Tantalum Capacitors

10 each	10 each	10 each	10 each	10 each
.1µF @ 35V	1µF @ 25V	3.3µF @ 35V	10µF @ 16V	22µF @ 16V
.22µF @ 35V	1µF @ 35V	4.7µF @ 35V	10µF @ 35V	33µF @ 25V
.47µF @ 35V	2.2µF @ 16V	6.8µF @ 35V	15µF @ 25V	47µF @ 25V

Part No.	Description	Wt. (lbs.)	1	10
81841CP	150 pcs. Tantalum Capacitor kit	4.8	$74.95	$67.95
130260CP	Refill for 81841CP (150 pcs.)	0.3	59.95	53.95

SALE

Diode Assortment Kit
SAVE $4

See pages 73-74 for photos and specs.
Includes 420 pcs. (15 types) Zener, Switching and Silicon Rectifiers

10 each	10 each	10 each	10 each	100 each
1N270	1N4001	1N4735	1N5408	1N914
1N751	1N4007	1N4742	C106B1	1N4004
1N3600	1N4733	1N5404	KBP04M	1N4148

Part No.	Description	Wt. (lbs.)	1	10
82587CP	420 pcs. Diode kit	5.0	$43.95	$39.95
130366CP	Refill for 82587CP (420 pcs.)	0.3	28.95	26.49

Transistor Assortment Kit
SAVE $14

See page 75-76 for photos and specs.
Includes 560 pcs. (20 types) NPN, PNP (High/Medium/Low Power) Transistors

10 each	10 each	10 each	10 each	100 each
2N2222A	2N4401	MJE3055T	TIP31A	2N3904
2N2907A	2N4403	MPF102	TIP32A	2N3906
2N3053	2N5951	MPSA06	TIP102	PN2222
2N3055	2N7000	MPSA13	TIP120	PN2907

Part No.	Description	Wt. (lbs.)	1	10
82595CP	560 pcs. Transistor kit	5.1	$87.95	$78.95
130374CP	Refill for 82595CP (560 pcs.)	0.4	77.95	69.95

DATAK
Photo Etch™ Printed Circuit Kit

Generate your own 1:1 artwork. Then use the patented Fast Neg film process to make a photo negative and sensitize and expose a blank copper board. Finish by developing and etching. No camera or darkroom is required.

Part No.	Product No.	Wt. (lbs.)	1	10
16731CP	12-750*	4.6	$39.95	$36.95

*Shipped via UPS ground to continental U.S. only

DATAK Direct Etch PCB "Starter" Set

Includes: 4 blank circuit boards, dry concentrated ferric chloride etchant, instructions, 8 sheets of direct etch donuts, DIPS, patterns lines and 1/32" & 1/16" etch resist tape.

Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
70412CP	ER1	PCB kit	0.7 ...	$11.95	$10.95

DATAK
Dry Concentrated Etchant

• Makes one pint of etch solution

Part No.	Prod. No.	Description	1	10	25
70201CP	ER3	Dry etchant	$3.95	$3.49	$2.95

DATAK
Accessories

16758CP   16723CP   70261CP

Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
16758CP	ER8*	Negative-acting resist developer 16 oz.	1.2	$6.95	$5.95
16723CP	ER18	TINNIT™ 1 pint	0.2	6.95	5.95
70261CP	ER71*	Negative-acting photo resist liquid 4 oz.	0.5	8.95	7.95
70480CP	ER181	TINNIT™, 1/2 gallon size (bulk pack)	0.6	15.95	14.49

*Shipped via UPS ground to continental U.S. only

Acid Brush

• Used for application of reactive solvents

Part No.	Description	1	10	100	1000
153322CP	Metal handle, 6'	$.59	$.49	$.36	$.25

Electronic Design Templates

These design templates are used to create simple schematic diagrams. The templates consist of electronic/electrical symbols such as resistors, capacitors (axial, radial, disc types), diodes, semiconductors in different packaging types, and center spacings.

Includes: Symbols, components and center spacing layouts

136637CP

136629CP

Part No.	Description	Scale	1	10	25
136637CP	Template "A"	1:1	$6.95	$6.25	$5.59
136629CP	Template "B"	2:1	6.95	6.25	5.59

DATAK
Single-Sided Copper-Clad Circuit Boards

One 5" x 6" and one 3" x 4.5" (copper clad one sided) 1/16" phenolic circuit board.

Part No.	Prod. No.	Description	1	10	25
16707CP	ER11	Circ. boards	$5.95	$5.35	$4.79

DATAK
Pre-Sensitized Circuit Boards & Developer

• Pre-coated circuit board
• Size: 3.0"L x 4.0"W x 1/16"T
Includes: Instructions

156751CP

Part No.	Description	1	10	25
156751CP	Single sided	$4.95	$4.49	$3.95
156742CP	Double sided	6.49	5.85	5.25
156734CP*	4 oz. Pos. developer ...	6.95	5.95	4.95

*Shipped via UPS ground to continental U.S. only

TECHSPRAY Workshop Chemicals

• Safe on plastics
• EPA SNAP approved, no CFCs or HCFCs

• Shipped via UPS ground to continental U.S. only.

139900CP   139934CP   118033CP   195240CP

Envi•Ro•Tech™ Duster

Part No.	Description	Wt. (lbs.)	1	12
139900CP	10 oz. aerosol w/ trigger	0.8 ...	$6.95	$6.25

Envi•Ro•Tech™ Freezer

Rapidly evaporating liquid that can chill to -62°F.

Part No.	Description	Wt. (lbs.)	1	12
139934CP	10 oz. aerosol can	0.8 ...	$8.95	$7.99

ECOLINE Cleaner Degreaser

• Rapid evaporation • 10 oz. aerosol can

Part No.	Description	Wt. (lbs.)	1	12
118050CP	Cleaner degreaser	0.8 ...	$9.95	$8.95

ECOLINE Flux Remover

• Dissolves type R, RMA, RA, SA and most no-clean fluxes • 10 oz. aerosol can

Part No.	Description	Wt. (lbs.)	1	12
118041CP	Flux remover	0.8 ...	$9.95	$8.95

ECOLINE Contact Cleaner

• Ideal for switches, relays, contact pads and other places of electrical connections • 10 oz. aerosol can
• Solvent will not damage switch housings

Part No.	Description	Wt. (lbs.)	1	12
118033CP	Contact cleaner	0.9 ...	$8.95	$7.95

VORTEX 360 Duster

• Vortex 360˚ invertible valve • 10 oz. aerosol

Part No.	Description	Wt. (lbs.)	1	12
195240CP	Dusting gas	0.8 ...	$9.95	$8.95

IVEX
WinDRAFT Schematic Design Software

"…still one of the most flexible, best featured, and economical schematic capture programs on the market suitable for professional use."
— Desktop Engineering

• Supports up to 450 pin designs
• Weight: 1.6 lbs.

System requirements: 486/DX2, 10MB hard drive space, 8MB RAM, SVGA (800 x 600)

Part No.	Description	1	10
142981CP	WinDRAFT	$139.95	$125.95

CAIG
Chemical Products

195160CP   195186CP

CircuitWriter™

Part No.	Description	Fl. (oz.)	1	12
195160CP	Conductive silver based ink	0.2	$13.89	$12.55

CaiKote™ 44 Kit

• Conductive carbon coating for button contacts and membranes

Part No.	Description	Wt. (oz.)	1	12
195186CP	Carbon based	0.2	$24.95	$22.45

Soldering Tip
What is the correct way to solder?

Incorrect   Correct

Follow these three steps:

Step One: The connection to be soldered must be clean. A small file, sanding pen or steel brush can be used if needed. A good soldered connection also requires a good mechanical connection. Make sure that wires are firmly attached to terminals or each other before soldering.

Step Two: When using a new soldering tip, coat the tip with solder to prevent oxides from forming, then immediately brush off the excess with a soft cloth to form a smooth, silvery soldering surface. This process is referred to as "tinning".

Step Three: Apply tapered surface of the soldering iron tip to the connection. Allow connection to become hot, then apply solder (see picture above). Don't use the point to melt solder – let the connection melt it to avoid "cold" solder joints. When soldering delicate components, work quickly and use a heat sink to draw off damaging heat.

General Purpose Prototyping Boards

Select the prototype board that fits your needs from our comprehensive product listing. Prototyping boards with punched holes are convenient, economical tools for assembling circuit components and trying cost-effective alternatives to custom designs.

- 0.062" board thickness
- 0.1" hole spacing
- 0.08" pad size
- Plated through pads are double-sided
- PCB material epoxy glass
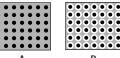
206578CP **21434CP** **52943CP** **21477CP**

Board Outline

Circuit Patterns

A Holes Only

B Pad Per Hole

C Power/Ground Perimeter Bus with Pad Per Hole

D 3 Hole Solder Pad and Bus

See pg 114 for PCB mounting enclosures and hardware (recommend P/N 106551CP)

Part Number	Product Number	Size (W" x L")	Fits Enclosure(s) (see page 114)	Circuit Pattern	Hole Pads	# Holes x Dia. †	Power/Ground Busses	Connector I/O or Edge	# Mounting Holes x Dia.	Weight (lbs.)	1	10	50	100
105099CP	2855PCB	1.60 x 2.70	18921CP	B	Single-sided	288 x .035"	None	None	2 x .115"	.02	$4.95	$4.49	$3.95	$3.59
105101CP	5002PCB	1.50 x 3.50	11957CP	C	Single-sided	365 x .038"	4	None	2 x .140"	.02	6.95	6.25	5.59	4.95
105128CP	2853PCB	2.00 x 4.40	18913CP, 11965CP	C	Single-sided	669 x .038"	4	None	4 x .140"	.03	7.95	6.95	6.25	5.59
105110CP	2300PCB	2.40 x 3.40	11869CP, 11914CP	C	Single-sided	637 x .038"	4	None	2 x .140"	.03	7.95	6.95	6.25	5.59
28177CP	PCB1	2.42 x 4.10	18913CP	C	Plated through	674 x .040"	None	None	4 x .120"	.04	5.95	5.35	4.79	4.29
105152CP	2851PCB	3.10 x 5.50	18892CP	C	Single-sided	1450 x .035"	7	None	4 x .140"	.07	9.95	8.95	7.95	6.95
105136CP	2320PCB	3.30 x 4.50	11885CP	C	Single-sided	1266 x .035"	4	None	4 x .140"	.06	9.95	8.95	7.95	6.95
105161CP	2852PCB	3.60 x 7.00	18905CP, 11973CP	B	Single-sided	2225 x .035"	4	None	4 x .140"	.10	14.95	13.45	11.95	10.95
206586CP	2746APCB	4.30 x 6.80	209349CP	C	Single-sided	2550 x .042"	5	None	4 x .140"	.07	9.99	8.99	8.19	7.39
21434CP	JE401(8001)	4.50 x 6.50	18868CP	B/D	Single-sided	2360 x .042"	2	None	None	.12	20.95	18.95	16.95	15.49
21451CP	JE405(8003)	4.50 x 6.50	18868CP	C	Single-sided	2360 x .042"	1	None	None	.12	19.95	17.95	15.95	13.95
43140CP	64P44XXXP*	4.50 x 6.50	18868CP	A	Drilled only	2860 x .042"	None	None	None	.09	6.95	6.59	6.25	5.95
52943CP	84P44WE	4.50 x 8.50	18876CP	A	Drilled only	3740 x .042"	None	None	None	.15	8.95	8.39	7.95	7.75
37604CP	169P44WE	4.50 x 17.0	N/A	A	Drilled only	7524 x .042"	None	None	None	.31	16.95	16.25	15.49	14.69
37612CP	169P44XXXP*	4.50 x 17.0	N/A	A	Drilled only	7524 x .042"	None	None	None	.25	12.95	12.29	11.69	10.95
206578CP	2743APCB	4.60 x 4.30	208910CP	C	Single-sided	1684 x .042"	5	None	4 x .140"	.07	6.99	6.29	5.69	5.19
105179CP	2505PCB	5.00 x 6.50	11893CP, 18868CP, 11949CP	C	Single-sided	2829 x .035"	7	None	8 x .120"	.13	14.95	13.49	11.95	10.95
28193CP	PCB3	5.00 x 8.00	18876CP	C	Plated through	3705 x .042"	4	Mounting area-I/O	4 x .120"	.17	23.95	20.95	19.95	17.95
21477CP	JE407(8006)	5.00 x 13.25	N/A	B	Plated through	6063 x .038"	None	None	8 x .120"	.28	39.95	35.29	33.49	31.85
206594CP	2747APCB	5.50 x 8.00	209357CP	C	Single-sided	3906 x .042"	5	None	4 x .140"	1.0	13.99	12.59	11.29	10.19
105187CP	2507PCB	6.10 x 8.80	18876CP	C	Single-sided	4771 x .035"	7	None	8 x .140"	.21	29.95	26.95	23.95	21.95
37621CP	169P84WE	8.50 x 17.0	N/A	A	Drilled only	14448 x .042"	None	None	None	.53	23.95	22.75	21.59	20.49

* PCB material: phenolic   † All 0.042" diameter hole boards use terminals T44, T49, and T421 (see below)

ISA Printed Circuit Prototyping Boards

Printed circuit prototyping boards for virtually any application – including those requiring high component densities and solder or wire wrap connections. All boards are manufactured to precision standards and specifications. All bus and circuit patterns are solder-coated for user convenience.

- Edge contacts: gold

21531CP **28206CP**

Part Number	Product Number	Description	Size (Inches) W x L	Terminals (below) T44	T49	T421	I/O Connector (not included)	Circuit Pattern	Hole Pads	# Holes x Dia.	Power/ Ground Bus	# Mounting Holes x Dia.	Weight (lbs.)	1	10	25
21531CP	JE417	PC/XT 8-bit	4.2 x 6.50	yes	yes	yes	D-sub 9, 15, 25 & 37	C	Plated through	2126 x .042"	2	8 x .120"	.12	$22.95	$17.25	$12.05
28206CP	PCB4	PC/XT/AT 16-bit	4.25 x 13.13	yes	yes	yes	D-sub 9, 15 & 25	C	Plated through	4890 x .042"	2	4 x .120"	.23	26.95	24.25	21.85

- See page 114 for circuit board mounting hardware   • See page 116 for aluminum round and hex spacers & standoffs

Wire Wrap and Push-In Terminals

For .042" Diameter Holes

Specifications:
- Material: copper alloy   • Prebagged 100 pcs.

34147CP: Push-In Micro-Klip Terminals
- Overall length: .36"   • Post size: .032" x .045"

34155CP: Miniwrap Wiring Terminals • Shoulder: .045"
- Two-prong with square tail for wire wrapping
- Overall length: .69"   • Post size: .025"Sq.

34163CP: Klipwrap Wiring Terminals • Shoulder: .045"
- Three-prong with square tail for wire wrapping
- Overall length: .83"   • Post size: .025"Sq.

34147CP 34155CP 34163CP
shoulder

Part Number	Mfr. Cross Ref. No.	Height Above .062" Board	Length Below .062" Board	1	10
34147CP	T421	.200	.097	$6.95	$6.25
34155CP	T44	.065	.530	8.29	7.69
34163CP	T49	.200	.530	11.59	10.75

Copper-Plated Blank Circuit Boards

Ideal for hobbyists and students doing prototypes of circuits. Copper plating on board for either single-sided or double-sided boards.

- 1.6mm thickness

Fig. 1 **Fig. 2** **Fig. 3**

Single Side						
Part No.	Product No.	Size (L" x W")	Fig.	Wt. (lbs.)	1	10	50
169279CP	PCBS3X6	3.0 x 6.0	3	0.1	$2.95	$2.69	$2.39
169287CP	PCBS6X6	6.0 x 6.0	2	0.2	4.95	4.49	3.95
169295CP	PCBS12X12	12.0 x 12.0	1	0.5	13.95	12.56	11.30
Double Side						
169308CP	PCBD3X6	3.0 x 6.0	3	0.1	$4.95	$4.45	$3.95
169316CP	PCBD6X6	6.0 x 6.0	2	0.2	7.95	7.15	6.45
169324CP	PCBD12X12	12.0 x 12.0	1	0.7	17.95	15.95	14.49

Color Code Legend
New Sale Qty. Save

These long-lasting solderless breadboards feature screen-printed color coordinates suitable for many types of digital and analog prototyping and circuit design. Larger models feature a heavy-duty aluminum backing with binding posts. Use Jameco's AC/DC breadboard power supply, P/N 77681CP (pg 111).

- Accepts most electronic components, including integrated circuits and transistors for digital and/or analog circuitry • 0.1" hole spacing
- Pins are identified by numbered rows and columns
- Ideal for high frequency and low noise circuits
- One-year warranty * WBU5 and JE series do not interconnect

20757CP　**20773CP**　**20790CP**　**20811CP**

20600CP

94457CP

20669CP

136901CP

20722CP　**77825CP**

Attention Educators! Buy jumper wire (pg 111) in bulk and SAVE! (see Hook-up Wire on page 117)

WBU5 Series Key Features:
- Horizontal assembly corresponds to the operation flow design of the PC boards for handy operation
- Round hole design makes the electric connection better
- Formed with V-shaped cross-sectional groove, which allows DIP IC pins to be inserted across two parts and to increase the rate of utilization due to small pitch
- Dovetail protrusions and recesses designed to connect two adjacent parts tightly together

JE Series Key Features:
- Use to breadboard and debug circuit designs
- Low static, plastic body – CMOS safe
- Nickel-plated clips designed to withstand up to 5,000 insertion cycles
- Breadboard strips connect together to form larger working areas
- Components are easily interconnected using 20-28 AWG wire (P/N 19289CP & 20079CP, pg 111)
- Some models feature heavy-duty aluminum backings (JE24, JE27, WBU504)

Part Number	Product Number*	Terminal Strips	Bus Strips	Contact Points	Binding Posts	Breadboard Size L x W (In.)	Baseplate Size L x W (In.)	Weight (lbs.)	Pricing 1	10	50	100
94457CP	JE19	0	1	100	0	6.5 x 0.4	—	0.04	$2.95	$2.65	$2.39	$2.15
20600CP	JE21	1	2	400	0	3.3 x 2.1	—	0.13	4.95	4.49	3.95	3.49
20669CP	JE22	1	0	630	0	6.5 x 1.4	—	0.20	5.49	4.95	4.49	3.95
194280CP	JE35	1	1	740	0	6.9 x 2.1	—	0.23	8.95	7.95	7.25	6.55
194298CP	JE37	1	2	840	0	6.9 x 2.4	—	0.25	9.95	8.95	7.95	7.25
194255CP	JE38	1	2	970	4	2.9 x 5.6	4.9 x 6.3	0.50	16.95	15.25	13.75	12.35
20722CP	JE23	1	2	830	0	6.5 x 4.0	6.5 x 2.1	0.30	8.95	7.95	7.25	6.55
194271CP	JE34	2	3	1,560	3	6.5 x 4.0	8.5 x 4.7	0.73	15.95	14.39	12.95	11.65
20757CP	JE24	2	1	1,360	2	6.5 x 3.1	8.5 x 4.0	0.60	12.95	11.95	10.95	9.95
136901CP	WBU504*	2	3	1,855	4	5.5 x 5.5	7.4 x 6.3	0.90	22.99	20.99	18.99	16.99
20773CP	JE25	2	4	1,660	3	6.5 x 4.3	8.5 x 5.1	0.80	18.95	16.95	14.95	13.95
20790CP	JE26	3	5	2,390	4	6.9 x 5.8	9.1 x 6.9	1.10	25.95	23.39	21.05	18.95
20811CP	JE27	4	7	3,220	4	7.3 x 7.5	9.5 x 8.3	1.40	31.95	29.95	27.95	25.95

Part No.	Description	1	10	25
77825CP	Breadboard pin to breadboard pin test leads (20 pk), 4 each color-coded (red, yellow, blue, black, white), 20 AWG wire, 5.9"L (15cm)	$11.99	$10.99	$9.99

PLCC Prototype Adapters

PLCC socket mounted on a circuit board for easy wire wrap or design prototyping. Solder masked PCB with 0.25" long leads.

73550CP

- PCB construction
- Silkscreen numbers identify pin numbers in groups of 5 and 10 • Gold-plated round pins
- Tin-plated PLCC connector
- PLCC socket identifies pin 1 and orientation key
- PLCC socket slotted for PLCC chip remover

Part No.	Pins	Size (L x W)	1	10	100
73541CP	44	2.3" x 1.6" ...	$11.95	$10.79	$9.69
73550CP	68	3.4" x 1.6"	15.95	14.49	12.95
73568CP	84	4.3" x 1.9"	23.95	21.59	19.45

PCI-Bus Extender Card

- PCI Bus
- Extends life of motherboard connectors
- Gold-plated fingers for long life
- Size: 5.9"L x 5.4"W

Part No.	Description	1	10
141381CP	PCI-bus extender card	$74.95	$67.49

BestProto AT/ISA Prototyping Board

- Can accommodate a PGA package with a 31 x 31mm footprint
- Twenty-one 1206 surface-mount bypass capacitor sites and 142 unconnected sites
- Size: 8.2"L x 4.2"W

Low noise power and ground planes

Includes: Signal definition chart

Part No.	Description	1	10	25
136469CP	AT/ISA protoboard	$29.99	$26.99	$24.29

PCI-Bus Prototype Board

- All plated through holes
- 0.1" hole spacing
- 50 Mil power and ground grids
- Provision for wire wrap and bypass caps
- Impedance matched to bus specifications
- Easy access to every signal on the bus
- Size: 12.4"L x 5.0"W • Weight: 0.6 lbs.

Part No.	Description	1	10
141372CP	PCI prototype bus board	$74.95	$67.49

See page 80 for Surface Mount Prototype Boards

8/16-Bit PC/XT/AT Solderless Plug-In Breadboard

- IBM PC/XT/AT and higher compatible
- 62 data I/O lines and a DB25 female connector for interfacing to peripherals
- Twenty-four 14-pin IC capacity
- Clearly labeled bus lines • 2,352 contact points
- Durable construction • One-year warranty
- Size: 13.8"L x 5.0"W • Weight: 1.0 lb.

Easy PC/XT/AT Prototyping!

Part No.	Description	1	10	25
81672CP	8/16-bit breadboard	$59.95	$53.95	$47.95

We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

It's that simple!

Wire Jumper Kit (350 pcs.)

- 25 each of lengths 0.1" through 5.0" (14 sizes)
- 350 assorted lengths in 13 colors
- Pre-stripped/preformed 22 AWG solid wire jumpers

19289CP: 350-piece wire jumper kit
- Handy, durable, clear plastic case

19289CP: 350-piece refill for 19289CP
- Case not included

19289CP

SALE

Part No.	Description	1	10	50	100
19289CP	Wire jumper kit	$15.95	$14.39	$12.95	$11.65
20079CP	Refill for 19289CP	9.99	8.99	7.99	7.25

Reinforced Jumper Wires

- 24 AWG-300 volts
- Reinforced pin ends for durability
- 10 pack assortment: 2 each yellow, white, red, black & blue

126341CP

Part Number	Mfr. Cross Ref. No.	Length (mm / inch)	1	10	100
126359CP	JW50	50 / 1.97	$3.95	$3.49	$2.95
126341CP	JW100	100 / 3.94	4.49	4.05	3.65
126324CP	JW200	200 / 7.87	4.69	4.25	3.85

Resistance and Capacitance Decade Substitution Boxes

Wide-range decade substitution boxes for product design or calibration checks.

- Light durable construction
- Case may be grounded separately
- Three binding posts permit isolated substitutions
- Size: 4.7"W x 5.7"H x 1.4"D
- Weight: 0.7 lbs.

211668CP:
- 1% resistance substitution from 1Ω to 11.111110MΩ
- 7 decade ranges of resistance
- Values can be changed in 1Ω increments

211676CP:
- 5% capacitance substitution from 100pF to 11,111µF
- 5 decade ranges of capacitance

211668CP

211676CP

EXTECH INSTRUMENTS

Part No.	Product No.	1	10
211668CP	380400	$98.95	$93.95
211676CP	380405	128.95	122.45

See page 80 for new surface mount proto boards that plug into standard solderless breadboards.

Digital/Analog Design Labs

- **Two 7-Segment Displays (digit height: 0.3")**
- One-year warranty

Solderless Breadboard
- Interconnected nickel-plated tie points, fitting all DIP sizes and all components with AWG #22-30 (0.3-0.8mm) solid leads

DC Power Supplies
- DC supplies equipped with short circuit protection
- Variable DC power: 0 to +15V & 0 to -15V @ 0.5A

Function Generator (5 ranges)
- Frequency range: 1Hz–10Hz, 10Hz–100Hz, 100Hz–1kHz, 1kHz–10kHz, 10kHz–100kHz
- Sine wave output: 0–8 Vp-p variable • Triangle wave output: 6Vp-p fixed • Square wave output: ±5V fixed

Our most popular digital lab!

International 115/220VAC Switchable

75838CP

201890CP

Part No.	Tie Points	Fixed Power Supply	Pulse Generator	Frequency Counter	Multimeter	Includes
75838CP	1580	±5VDC @ 1.0A	No	No	DCV (Digital)	Power cord, manual
201890CP	2960	±5VDC @ 0.5A	Yes (1Hz to 1MHz switchable)	Yes	ACV, DCV, DCmA, resistance (analog)	Power cord, enclosed case, test lead, jumper wire kit, DB25 serial adapter, manual

Part No.	Description	Size (W" x D" x H")	Weight (lbs.)	1	10	25
75838CP	Digital lab	10.6 x 13.3 x 5.0	8.1	$276.95	$249.95	$226.95
201890CP	Digital/analog lab	13.9 x 12.8 x 4.9 (back panel)	11.8	429.95	389.95	349.95

Digital-Analog Design Lab

Solderless Breadboard
- 2712 interconnected nickel-plated tie points, fitting all DIP sizes and all components with AWG #22-30 (0.3-0.8mm) solid leads

DC Power Supplies
- Variable DC output: 0 to +15V & 0 to -15V @ 500mA Fixed DC output: +5VDC, 1A; -5VDC, 300mA
- Input power: 120/220VAC @ 50-60Hz (switchable)

Function Generator
- Frequency ranges: 1Hz–10Hz, 10Hz–100Hz, 100Hz–1kHz, 1kHz–10kHz, 10kHz–100kHz
- Sine wave output: 0–8 Vpp variable • Triangle wave output: 0–6 Vpp variable
- Square wave output: 0–8 Vpp variable

Other features:
- 2 variable resistors: VR1=1kΩ, VR2=100kΩ • 8 data switches • 2.5" dia. 8Ω, 25W speaker
- 2 pulse switches (2 sets of outputs: $\overline{A}$, A, $\overline{B}$, B) • 2 banana sockets, 2 BNC jacks • One-year warranty
- Two 7-segment LED displays (digit height: 0.3") • 8 red LEDs with separate input terminals

Includes: Power cord and manual

International 120/220VAC Switchable

Part No.	Description	Size (W" x D" x H")	Weight (lbs.)	1	10	25
136266CP	Digital-analog lab	12.8 x 9.8 x 3.7	8.5	$379.95	$341.99	$307.79

AC/DC Power Supply
Ideal for Breadboards on page 110

International 120/220VAC Switchable

Output Specifications:
+5VDC @ 1A; -5V @ 300mA fixed;
0 to +15VDC @ 500mA variable,
0 to - 15VDC @ 300mA variable;
12-6-0-6-12 tapped VAC, 300mA fixed

With built-in short-proof regulated power supplies.

- Input power: 120/220VAC @ 50-60Hz (switchable)
- Indicator lamps and power fuses
- Just plug-in and start to use
- Compact and lightweight
- For both digital and analog circuits
- Color: beige
- Compatible with test leads P/N 77841CP, pg 145
- Size: 7.4"W x 5.5"D x 2.6"H
- Weight: 5.5 lbs. • One-year warranty

Part No.	Description	1	10	25
77681CP	Power supply	$119.95	$109.95	$99.95

Powered Project Board

- Solderless breadboard with 2420 tie points
- DC power supplies: +5V @ 1A; variable power 0 to +15VDC and 0 to -15VDC @ 500mA
- Back panel has ground terminal
- Outputs are short-circuit protected
- Edge plate for non-DIP size components
- Input power: 120/220VAC @ 50-60Hz (switchable)
- Replacement fuse: P/N 103907CP, pg 88
- Power switch with light
- Breadboard size: 7.4"L x 6.8"W
- Enclosure size: 9.8"L x 8.0"W x 2.6"H
- Weight: 6.8 lbs.
- One-year warranty

Includes: Power cord

International 120/220VAC Switchable

CE

Part No.	Description	1	10	25
136258CP	Powered breadboard	$99.95	$89.95	$79.95

Color Code Legend
New Sale Qty. Save

Color Code Legend
New Sale Qty. Save
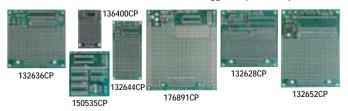
micro*Engineering Labs*   "PICProto" Prototyping Boards

- High quality blank prototyping boards for PICmicro microcontrollers
- Holds microcontroller, 5V regulator, oscillator, capacitors and DB9-25 connector
- Double-sided board with plated-through holes • Large prototyping area
- Solder mask on both sides makes soldering easy • Silkscreen legend

Includes: Documentation sheet with schematic, suggested parts and placement

136400CP

132636CP

132644CP

150535CP

176891CP

132628CP

132652CP

PICProto 18, 18L: For all 18-pin PICs including PIC16C52, 54, 56, 58, 554, 558, 61, 620, 621, 622, 71, 710, 711, 712, 715, 716, 84, 16CE623, 624, 625, 16F627, 628, 83, and 84

Part No.	Description	Size (L" x W")	1	10
132644CP	PICProto 18	3.0 x 1.5	**$9.95**	**$8.95**
176891CP	PICProto 18L	3.6 x 4.1	**19.95**	**17.95**

PICProto 3: For the 28-pin PIC16C62, 63, 642, 66, 72, 76, 773, 16F73, 76, 870, 872, 873, 876, 18C242, and 252

132636CP	PICProto 3	3.0 x 3.0	**$14.95**	**$13.49**

PICProto 64: For the 40-pin PIC16C64, 65, 662, 67, 74, 77, 774, 16F74, 77, 871, 874, 18C422, and 452

132652CP	PICProto 64	4.0 x 3.0	**$16.95**	**$14.95**

PICProto 8: For all 8-pin PIC12Cxxx and 12Cexxx

136400CP	PICProto 8	2.0 x 1.2	**$8.95**	**$7.95**

PICProto Dual: For 18-pin PIC16C52, 54, 56, 58, 554, 558, 61, 620, 621, 622, 71, 710, 711, 712, 715, 716, 84, 16CE623, 624, 625, 16F627, 628, 83, & 84, as well as 28-pin PIC16C55, & 57. Accepts standard 0.6" 28-pin device or 0.3" skinny DIP

132628CP	PICProto Dual 18/28	3.0 x 3.0	**$14.95**	**$13.49**

PICProto S1: For working with circuits in "Easy PIC'n" and PIC'n Up the Pace" (pg 0). Holds 18-pin PICmicro, oscillator, 5-volt power supply, DIP switches, & socket to solderless breadboard

150535CP	PICProto S1	2.1 x 1.9	**$14.95**	**$13.49**

micro*Engineering Labs*   EPIC Plus PICmicro Programmer

The EPIC Plus Programmer quickly and easily programs the PIC12Cxxx, 12CExxx, 16C505, 16C55x, 6xx, 7xx, 84, 9xx, 16CE62x, 16F62X, 7x, 8x, 87x, 14C000, 17C7xx, 18Cxxx microcontrollers from Microchip. The basic programmer includes an 18-pin socket for programming 8, 14 and 18-pin PICmicro MCUs. Devices available separately on page 66.

- Simple installation with parallel port (printer) interface
- Interactive software for Windows and DOS
- Command line operation for automated, non-interactive programming
- PICmicro Assembler software included

Requires: Two 9V batteries or AC adapter (below)

Part No.	Description	1	10
132679CP	EPIC Plus PICmicro programmer	**$59.95**	**$53.95**
136397CP	8/18/20-pin ZIF adapter	**34.95**	**31.95**
132610CP	40/28-pin ZIF adapter	**34.95**	**31.95**
162317CP	AC wall adapter (16VDC/500mA, details on page 54)	**7.95**	**6.95**
67256CP	6' DB25 cable (details on page 160)	**6.45**	**5.79**

See the yellow and green highlighted items.

Jameco Special Values!

Details on page 4.

micro*Engineering Labs*   PICBasic and PICBasic Pro Compiler

PICBasic converts your BASIC programs into files that can be programmed directly into a PICmicro MCU.

- Compatible with most PICmicro MCU programmers including EPIC plus
- Use in DOS or Windows (includes Windows editor/DE software)
- I2C instructions to access external serial EEPROMs
- In-line assembler and call support

132661CP: PICBasic Compiler
- Expanded BASIC Stamp I compatible instruction set
- PEEK and POKE instructions to access any register from BASIC
- Serial speeds to 9600 baud
- Supports PC12C67x, PIC14Cxxx, PIC16C55x, 66x, 7xx, 84, 92x, and PIC16CF8xx microcontrollers
- May use up to 2k of code space

150543CP: PICBasic Pro Compiler
- Direct and library routine access to any pin or register
- Automation page boundary handling past 2k • Bit, byte, word arrays
- Real If…Then…Else…Endif • Hierarchical expression handling
- Interrupts in BASIC and assembler • BASIC Stamp I and II library
- Built-in LCD support • MPLAB/MPASM/ICE compatibility
- Supports 12C5xx, 12C67x, 12CE67x, 14C000, 16C5x, 16C55x, 6xx, 7xx, 84, 92x, 16CE62x, 16F62x, 7x, 8x, 87x, 17Cxxx, and 18Cxxx microcontrollers

132661CP

Part No.	Description	1	10
132661CP	PICBasic compiler	**$99.95**	**$89.95**
150543CP	PICBasic Pro compiler	**249.95**	**224.95**

micro*Engineering Labs*   LAB-X1 Experimenter's Module Board

The LAB-X1 is a pre-assembled experimenter's platform. It provides an assembled testbed containing most of the circuitry commonly used with PICmicro microcontrollers (MCUs). Many different projects may be created using the LAB-X1, including calculator, voltmeter, LCD backpack, tone dialer, and RC servo controller.
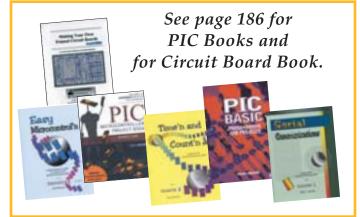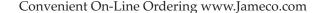
- 40-pin ZIF socket for PICmicro MCU (not included, PIC16F877-20/P recommended)
- Jumper selectable oscillator from 4MHz to 20MHz
- Reset button • 16 switch keypad • 3 potentiometers • LED bargraph
- 2 lines x 20 characters LCD module • Speaker • 2 RC servo connectors
- RS232 interface • Socket for RS485 interface (device not included)
- Socket for I2C & SPI serial EEPROM (device not included) • One-year warranty
- Socket for Microwire serial EEPROM (device not included)
- Socket for real time clock/serial analog to digital converter (devices not included)
- EPIC in-circuit programming connector • Prototyping area for additional circuit
- Wiring for microchip in-circuit debug connector • Size: 5.5" x 5.6"

Requires: AC adapter (below)

Part No.	Description	1	10
169113CP	LAB-X1 Experimenter Board	**$199.95**	**$189.95**
176903CP	LAB-X1 Experimenter Board Kit	**149.95**	**139.95**
198168CP	LAB-X2 for 28 and 40-pin MCUs	**69.95**	**62.95**
198176CP	LAB-X3 for 18-pin MCUs	**119.95**	**107.95**
176882CP	PIC16F877-20/P microcontroller (pg 66)	**9.49**	**8.49**
127976CP	AC adapter (details on page 53)	**4.75**	**4.25**

See page 186 for PIC Books and for Circuit Board Book.

High-Speed Universal Device Programmer/Tester

Parallel Port Interface

- 48-pin universal ZIF socket accepts any number of pins
- Programs Flash memory, PROM, EPROM, EEPROM, Serial (E)EPROM, Bipolar PROM, PAL, PALCE, GAL, NVRAM, PEEL, EPLD, SPLD, CPLD, PIC & Microcontrollers
- Tests TTL, CMOS, DRAM and Static RAM ICs
- 5000+ device types supported
- On-board FPGA for speed; 4 times faster than offshore brands
- Supports real 5.0V; 3.3V, 2.7V, 2.0V & 1.8V devices
- Hardware diagnostic program examines all 48-pin drivers
- Supports POF and JEDEC formats
- Detects pin locations for poor or damaged contacts
- Current limiting protects hardware circuits from improperly inserted or defective chips
- High-speed device function tests and user creatable test library
- Read, blank check, program, verify, checksum, data compare, security, auto (erase, blank check, program, verify), and option bit program function
- Built-in editor for both buffer date and test vectors
- CE/CUL/CSA quality certified

207765CP

207757CP

207749CP

Includes: Parallel cable, installation diskette, power cord and manual

System Requirements: IBM PC, XT, AT, 386, 486, Pentium®, hard drive, 512k RAM, Windows® 95/98/2000/NT, and parallel port

Part No.	Description	1	5
207765CP	TOPMAX	$875.95	$832.95
207757CP	32-pin DIP adapter	289.95	274.95
207749CP	32-pin PLCC adapter	499.95	474.95

16kB-8MB Universal IC Programmer/Tester

Serial Port Interface

- 40-pin universal ZIF socket
- Programs PROMs, EPROMs, EEPROMs, flash memory, serial PROMs, BPROMs, DSP, microcontrollers, PLD/CPLD/FPGA, PALs, GALs, PEEL and EPLD
- Load file, read master, program, verify, auto, id check, checksum, blank check, erase, secure, protect/unprotect, edit, file transfer, function configuration, self-test functions
- IC tester function supports CMOS, SRAM and TTL
- Supports popular file formats including Intel HEX, Motorola S-records, binary, JEDEC fuse map, Altera POF and others • One-year warranty

168348CP

HI-LO SYSTEMS

Includes: Programmer, serial cable, software, manual, & table top power supply w/ 6′ power cord
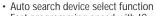
System requirements: 486, Pentium® and higher; Windows® 95/98/NT/2000

206922CP

206922CP: 1.1" x 0.46" EPROM & DIP window labels; UV opaque; accepts ink or pencil (168 per pack)

SALE

Part No.	Description	1	10
168348CP	Serial univ. prog./tester ...	$899.95	$799.95
206922CP	1.1" x .046" window label	6.95	5.95

Versatile, Production Quality Universal Programmers

Parallel Port Interface

- **207773CP:** 48-pin ZIF socket
- **207781CP:** One 48-pin and three 32-pin ZIF sockets
- 3000+ device types supported
- Supports EPROM, flash, microcontroller, Serial (E)EPROM, EPLD, PALCE, GAL, PEEL
- Auto search device select function
- Fast programming speed with IC vendor approved algorithms
- Built-in editor for both buffer date and test vectors
- Supports JEDEC, Intel Hex, Motorola S Records, Binary and ASCII file formats with File LOAD/SAVE command
- Built-in macro commands for programming

207781CP

Includes: 01/02/03 personality modules, parallel cable, wall adapter, diskette and manual

System Requirements: IBM PC, XT, AT, 386, 486, Pentium® or compatibles, DOS 2.11 or greater, Windows® 95/98/2000/NT/XP; hard disk, 512k RAM and standard parallel port

Part No.	Description	1	5
207773CP	MEGAMAX programmer	$375.95	$355.95
207781CP	MEGAMAX4G prog.	449.95	426.95

One-Socket EPROM Programmers 1MB and 8MB

Serial Port Interface

- ZIF socket
- Motorola s1f, s2f and s3f can convert to binary or ASCII prior to download
- Baud rate configurable
- Data bits: 8 • Start/Stop bits: 1
- Parity: none, even, odd, default none
- Flow control: none, RTS/CTS, XON/XOFF, Default RTS/CTS • One-year warranty

82384CP

82384CP:
- Programs EPROMs up to 512kbits and the Intel 27CO11 (1Mbits); 2716-27512; 2804-8256; also 27CXXX and 28CXXX series
- Selectable VPP from 5V-25V • Maximum pins: 28

81699CP:
- Command line interpreter enables the user to enter one or more single character commands at once
- Programs EPROMs up to 8Mbits: 2716-27080; 2804-28256; also 27CXXX and 28CXXX series
- Maximum pins: 32 • Weight: 3.0 lbs.

Part No.	Description	1	10
82384CP	1Mbits EPROM prog.	$199.95	$179.95
81699CP	8Mbits EPROM prog.	209.95	188.95

HI-LO SYSTEMS

EPROM Eraser

- Erases all UV erasable EPROMs
- Holds a total of 16 EPROMs 32-pin
- Upper and lower erasing chambers
- Conductive foam liner eliminates static build-up • One-year warranty
- Size: 8.5"L x 2.8"W x 2.8"H • Weight: 1.6 lbs.

Includes: AC adapter – 9VDC @ 600mA and a timer which turns eraser off at the end of the selected time period – 10 to 60 minutes

Part No.	Description	1	10
121267CP	EPROM eraser	$149.95	$134.95

Fast, Low-Cost Universal Device Programmer

Parallel Port Interface

- 40-pin ZIF socket
- Programs (E)EPROM, PROM, Serial PROM, PALCE, GAL, flash memory, microcontrollers, ATF
- 2000+ device types supported
- Menu driven software
- On-board FPGA for speed; 4 times faster than offshore brands
- Auto search device select function supports (E)EPROM & microcontrollers
- Device insertion test identifies improperly inserted device before programming
- Auto programming for production programming
- Read, blank check, program, verify, checksum, data compare, security, auto function

Includes: Parallel cable, wall adapter, diskette & manual

System requirements: IBM PC, XT, AT, 386, 486, Pentium®, hard disk, 512k RAM, standard parallel port, MS-DOS 2.11 or higher, Windows® 95/98

Part No.	Description	1	5
207731CP	CHIPMAX	$349.95	$332.95

512k Two-Socket E(E)PROM Programmer

Compact unit operates stand-alone or interfaces with your computer via the printer port.

- Programs EPROMs up to 25V, Flash EPROMs (5V and 12V) EEPROMs, and SRAMs
- 2 sockets for master/ slave operation
- Stand alone mode uses two optional 9V batteries (P/N 151095CP, pg 200) or included 12VDC @ 500mA adapter
- One-year warranty • Size: 6.4"L x 4.3"W x 2.2"H

FUNCTIONS
Stand alone mode
- Functions Set - Blank check
- IC Type select - Program
- Verify and check sum
Remote control mode
- Type - Read - Program
- Verify - Disk - Help
- Process - Parameter

Includes: Adapter, cable and CD-ROM

Part No.	Description	1	10
130155CP	EPROM writer	$289.95	$259.95

EPROM Erasers and Accessories

66042CP:
- Erases all EPROMs
- Erases 1 chip in 7 minutes
- Conductive foam liner eliminates static build-up
- UV intensity: 6.5mW/cm² • One-year warranty
- Size: 6.8"L x 1.5"W x 2.3"H • Weight: 0.8 lbs.

66042CP

UVP

Requires: Four AA batteries (not included), recommend P/N 32627CP (below)

15712CP:
- Erases all EPROMs
- Erases 1 chip in 15 min.
- Erases 8 chips in 21 minutes
- Maintains constant exposure distance of 1"
- Conductive foam liner eliminates static build-up
- UV intensity: 6.8mW/cm²
- Built-in safety lock to prevent UV exposure
- Complete with holding tray for 8 chips
- Size: 9.0"L x 3.7"W x 2.6"H • Weight: 2.3 lbs.

15712CP

Part No.	Description	1	10	25
66042CP	Portable eraser	$64.95	$58.95	$52.95
15712CP	8-chip eraser	109.95	104.95	99.95
34382CP	Lamp for 15712	34.95	34.95	34.95
13864CP	Foam (12"x24"x0.25)	7.95	6.95	5.95
32627CP	'AA' Ni-Cad battery	1.95	1.75	1.49

Prototype Builder Boards, Enclosures and Hardware

Call for additional OEM pricing.

The prototype builder boards on this page are specifically designed to fit into our ABS speedy boxes, die cast aluminum enclosures, aluminum boxes, metal cabinets and heavy-duty instrument cases shown in each grouping. These pre-cut boards have 2 or 4 mounting holes compatible with the PC board mounting hardware listed at the bottom, right (P/N 106551CP).

Board description: laminated glass epoxy 1/16" thick fire retardant per FR-4 specs. Copper-clad and solder mask one side. Drilled holes: .035" diameter on .080" square pad. Pads spaced on .10" x .10" grid.

See page 116 for hardware and knobs; see page 109 for more printed circuit board details

119618CP
4 ea. Rubber Feet

18921CP
18913CP
18892CP
11885CP
11922CP
105110CP*
105161CP*

106551CP
Hardware Set; 20 pcs. (used with all boards) (see details below)

105099CP
105128CP
105152CP*
105136CP*
105136CP*
105099CP
105152CP*

208901CP

*All boards sold individually; multiple boards shown

ABS Speedy Enclosures

18913CP

Will not crack or split when drilled or punched. PCB mounting slots on all four sides. Lid has a lip for precision fit (adds 0.4" height). Complete with four screws and lid. All sizes below are for interior dimensions. • Color: black • ABS plastic

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
18921CP	H2855	3.1" x 2.0" x 0.9"	0.1	$2.99	$2.69	$2.45	$2.19
18913CP	H2853	4.9" x 2.5" x 1.5"	0.2	3.15	2.85	2.55	2.35
18892CP	H2851	6.0" x 3.5" x 1.9"	0.4	4.49	4.05	3.65	3.29
18905CP	H2852	7.5" x 4.3" x 2.3"	0.5	6.49	5.85	5.29	4.75
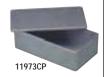
Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole (*except P/N 105099CP) • Plated one side holes

105099CP

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105099CP*	2855PCB	2.7" x 1.6"	288	$4.95	$4.49	$3.95	$3.59
105128CP	2853PCB	4.4" x 2.0"	669	7.95	6.95	6.25	5.59
105152CP	2851PCB	5.5" x 3.1"	1450	9.95	8.95	7.95	6.95
105161CP	2852PCB	7.0" x 3.6"	2225	14.95	13.45	11.95	10.95

Die-Cast Aluminum Enclosures

High-quality die-cast aluminum cases come with channeled walls for easy PCB mounting. Ideal for RF circuits because the lid forms an effective screen against RFI interference. Made from aluminum, an excellent heat-sink, these cases are great for high temp circuits (up to 600°C). Complete with screws.

11973CP

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11957CP	B5002	3.9" x 2.0" x 1.0"	0.2	$5.95	$5.39	$4.85	$4.35
11965CP	B5004	4.7" x 2.4" x 1.6"	0.4	7.95	7.15	6.44	5.79
11973CP	B5006	7.5" x 4.3" x 2.4"	1.2	13.49	12.15	10.95	9.85

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole
• Plated one side holes

105101CP

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105101CP	5002PCB	3.5" x 1.5"	365	$6.95	$6.25	$5.59	$4.95
105128CP	5004PCB	4.4" x 2.0"	669	7.95	6.95	6.25	5.59
105161CP	5006PCB	7.0" x 3.6"	2225	14.95	13.45	11.95	10.95

Aluminum Enclosures

11885CP

Ideal boxes for those projects that get left lying around! Put them in an economical aluminum enclosure. The enclosure comes in two pieces which slide together.

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
11869CP	B2300	4.0" x 2.0" x 2.8"	0.2	$5.45	$4.69	$4.22	$3.79
11885CP	B2320	5.0" x 4.0" x 3.0"	0.4	7.89	6.15	5.55	4.99
11893CP	B2335	7.0" x 6.2" x 4.6"	0.8	10.95	9.25	8.29	7.49

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus w/ pad per hole
• Ground Bus   • Plated one side holes

105136CP

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105110CP	2300PCB	3.4" x 2.4"	637	$7.95	$6.95	$6.25	$5.59
105136CP	2320PCB	4.5" x 3.3"	1266	9.95	8.95	7.95	6.95
105179CP	2335PCB	6.5" x 5.0"	2829	14.95	13.49	11.95	10.95

Metal Enclosures

208901CP

High-quality metal enclosures are made to suit a large variety of electronics projects and applications. The base is made of aluminum. Slots are located on the sides of the cases for maximum cooling. Cases screw together and come with an attractive two-tone finish.
• Mounting screws and rubber feet included
• Glossy black textured steel top cover and ivory aluminum base

208910CP   208928CP

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
208901CP	B2741A	4.0" x 3.3" x 2.2"	0.4 ...$6.49	$5.89	$5.29	$4.69	
208910CP	B2743A	5.9" x 5.3" x 3.0"	0.8 ..... 7.99	7.19	6.49	5.89	
208928CP	B2744A	7.3" x 6.3" x 2.8"	1.1 ..... 8.99	7.99	7.19	6.49	
209349CP	B2746A	6.3" x 7.8" x 2.5"	0.9 ..... 12.99	11.69	10.49	9.49	
209357CP	B2747A	7.5" x 9.8" x 3.2"	1.4 ..... 14.99	13.49	12.19	10.99	

Printed Circuit Boards for Above Enclosures

• Power/ground, perimeter bus with pad per hole   • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105110CP	230APCB	3.4" x 2.4"	637	$7.95	$6.95	$6.25	$5.59
206578CP	2743APCB	4.6" x 4.3"	1684	6.99	6.29	5.69	5.19
206586CP	2746APCB	4.3" x 6.8	2550	9.99	8.99	8.19	7.39
206594CP	2747APCB	5.5" x 8.0"	3906	13.99	12.59	11.29	10.19
105179CP	2505PCB	6.5" x 5.0"	2829	14.95	13.49	11.95	10.95

Heavy-Duty Instrument Cases

Both cases split apart for ease of working. Four plastic feet molded on unit. P/N 18876CP includes ventilation and speaker sound slots.   • Color: gray

18868CP

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
18868CP	H2505	7.9" x 6.3" x 2.5"	0.8 ..$7.39	$6.69	$5.99	$5.39	
18876CP	H2507	10.0" x 7.5" x 3.1"	1.4 ..8.99	7.99	7.28	6.55	

Printed Circuit Boards for Above Instrument Cases

• Power/ground, perimeter bus with pad per hole   • Plated one side holes

Part No.	Product No.	Size (L x W)	No. of Holes	1	10	50	100
105179CP	2505PCB	6.5" x 5.0"	2829	$14.95	$13.49	$11.95	$10.95
105187CP	2507PCB	8.8" x 6.1"	4771	29.95	26.95	23.95	21.95

ABS Enclosures w/ Clear Tops

Made of gray ABS plastic w/ clear polycarbonate top cover. Includes screws for mounting boards or electronic components, rubber gasket for a tight seal on your equipment & drilled holes for mounting.

141840CP

Part No.	Product No.	Size (L x W x D)	Wt. (lbs.)	1	10	50	100
141831CP	203C1	4.6" x 3.2" x 1.8"	0.3	$8.95	$8.09	$7.25	$6.55
141840CP	203D1	6.3" x 3.2" x 1.8"	0.4	9.95	8.99	8.09	7.25
141858CP	203F1	7.0" x 5.5" x 2.5"	0.8	11.95	10.79	9.69	8.69

Mounting Hardware for PC Boards

• 4 spacers, 8 screws and 8 washers

Part No.	Description	1	10	50	100
106551CP	PC board mounting hardware	$1.79	$1.65	$1.45	$1.35

For **3M** Adhesive Rubber Feet, see page 116.

Component Cabinet

81701CP

85446CP
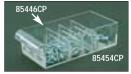
85454CP

Drawer (85454CP) Divider (85446CP)

- Drawer can be divided into 4 sections (clear)
- Wall mountable cabinet (ABS black)
- Cabinet size: 6.0"D x 15"W x 7.9"H • Wt.: 4.7 lbs.
- Drawer size: 5.5"L x 2.7"W x 1.5"H
- Divider size: 2.4"L x 1.1"H

Includes: 20 clear plastic drawers, 20 dividers and 30 adhesive I.D. labels

✳ Prepackaged: order in increments of 10 or 100

Part No.	Description	1	10	50
81701CP	Component cabinet	$15.95	$13.95	$12.49
85454CP	Drawer for cabinet	.39	.35	.29
85446CP	Divider for drawer ✳		.19	.17

Plastic Fliptop Boxes

- Clear plastic box with a clear plastic lid and removable dividers
100255CP: Size: 8.4"L x 4.5"W x 1.4"H
- 18 compartments (1.4" x 1.5" each)
148902CP: Size: 10.2"L x 4.7"W x 1.6"H
- 12 compartments (1.7" x 2.3" each)

100255CP

Part No.	Description	1	10	100
100255CP	18 compartments	$2.25	$1.95	$1.75
148902CP	12 compartments	3.95	3.49	2.95

Plastic Fliptop Box

Double-Sided Box
- Unique double-sided design allows box to be opened from both top and bottom
- Size: 6.5"L x 4.0"W x 1.5"H

Part No.	Description	1	10	100
148865CP	Double sided box	$2.59	$2.29	$1.95

Plastic Fliptop Case for SMDs

128 Compartments for Surface Mount Components
- 8 rows x 16 columns grid
- Fliptop openings on each bin
- Padded cover locks bins closed
- Perfect match to store P/N 156881CP SMD resistor assortment, pg 81
- Size: 11.0"L x 8.3"W x 1.7"Thick
- Weight: 1.4 lbs.   •Color: gray

Includes: Labels for each bin

Part No.	Description	1	10
164267CP	SMD fliptop case	$47.99	$43.19
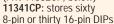
Stackable Drawers

- Case size: 4.5"L x 4.4"W x 2.3"H
- Drawer size: 4.4"L x 4.0"W x 0.9"H
- Color: blue/white

Part No.	Description	1	10	100
11906CP	Case/drawers	$3.49	$2.65	$1.85

Bug Boxes

- Anti-static plastic
- Fits in bug cage (P/N 11332CP, below)
- **11341CP:** stores sixty 8-pin or thirty 16-pin DIPs
- **11375CP:** Designed to store all types of components
- Box size: 4.9"L x 3.3"W x 0.6"H

11375CP

11341CP

Part No.	Description	1	10	100
11341CP	30 compartments	$3.95	$3.49	$3.15
11375CP	3 compartments/6 vertical & 6 horizontal dividers	4.49	3.95	3.49

Bug Trays

- Fits in bug cage (P/N 11332CP, below)
- **11826CP Open:** 1 compartment 4.6"L x 3.2"W x 0.4"H
- **11800CP Divided:** 10 compartments 3.2"L x 0.4"W x 0.4"H ea.
- Tray size: 4.8"L x 3.6"W x 0.5"H

11800CP   **11826CP**

Part No.	Description	1	10	100
11826CP	Open bug tray	$2.85	$2.40	$2.15
11800CP	Divided bug tray	3.45	3.10	2.79

Bug Cage

- Holds bug boxes or trays
- Modular and interlocking
- Color: blue • Weight: 0.7 lbs.
- Case size: 5.0"L x 3.9"W x 5.1"H

Drawers not included

Part No.	Description	1	10	100
11332CP	Bug cage	$7.95	$7.15	$6.39

RCA Jacks and Adapter

112475CP   **185842CP**   **169501CP**   **159484CP**

172339CP   **159441CP**   **215458CP**   **215440CP**

- Standard RCA jacks for audio and video signals

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
112475CP	.44"W x .58"D x .48"H	$.39	$.35	$.31	$.19
169501CP	.40"W x .85"D x .50"H	.39	.35	.31	.23
185842CP	.44"W x .58"D x .48"H	.12	.10	.09
159484CP	.84"W x .38"H Black	.49	.44	.39	.24
172339CP	.84"W x .38"H Red	.49	.39	.31	.23
159441CP	RCA F to F adapter	1.99	1.79	1.49	1.25
215458CP	3.5mm mono jack to RCA	.89	.79	.69	.59
215440CP	3.5mm to 1/4" jack (mono)	.79	.69	.59	.59

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

It's that simple!

RCA Audio/Video Cables

139037CP   **177527CP**   **190617CP**

- Video/audio applications
- Color: black except as shown *184882CP: Low loss

Part No.	Description	1	10	100
196808CP	5" Y: 1/8" F to 2 RCA M	$.75	$.65	$.59
183302CP	4' 2 males (red/black)	2.95	2.25	1.55
139037CP	5" Y: 1/8" M to 2 RCA M	1.99	1.49	.99
215466CP	8" Y: 1/8" M to 2 RCA M	1.89	1.69	1.53
177527CP	6' 3 males to 3 males	4.95	3.75	2.65
184882CP	6' 3 males to 3 males*	3.95	2.95	2.09
215474CP	3' male to female (gray)	.89	.79	.69
183311CP	4' male to male	.99	.89	.79
206973CP	4' male to male (yellow)	.99	.89	.79
106374CP	6' male to male	1.19	1.09	.86
190617CP	10' male to male	1.49	1.15	.99
29348CP	10' male to male (yellow)	1.69	1.49	1.25

Aluminum Instrumentation Knobs
(1/8" and 1/4" Shaft Diameters)

Includes: Set screw for secure attachment
138384CP: • Coarse surface for sensitive control

162481CP Fig. 1   138384CP Fig. 2   162499CP Fig. 3   162499CP Fig. 4

Part No.	Mfr. Cross Ref. No.	Figure	Description	Shaft Dia. (in.)	Dia.	Height	1	10	100
162481CP	K5-1/4S	1	Silver position pointer	.250	.50	.56	$1.19	$1.09	$.96
138384CP	KD500G	2	Silver position pointer	.125	.50	.63	1.39	1.25	.99
162499CP	K5-1/4B	3	White position pointer	.250	.50	.56	1.55	1.39	1.07
138481CP	KN031	4	Black position pointer	.250	.61	.65	1.49	1.35	1.15
138501CP	KN032	4	Black position pointer	.250	.87	.75	1.79	1.59	1.39
138510CP	KN033	4	Black position pointer	.250	1.18	.87	2.49	2.24	1.95

Instrumentation Knobs
(1/4" Shaft Diameters)

102787CP   **104176CP**   **202286CP**

136240CP/ 138392CP

- Fits 0.25" shafts
102787CP/104176CP/202286CP:
- Brass insert and set screw for strength and durability
- Compatible with all rotary switches
136240CP: • Used with 1/2-watt and 2-watt linear taper potentiometers, pg 86 & 87
138392CP: • Brass insert, dual set screws
- Black knob with inset chrome top

Part No.	Mfr. Cross Ref. No.	Size	1	10	100
102787CP	KN141	1.25"L x .54"H	$.64	$.41	$.39
104176CP	KN143	.75"D x .49"H	.99	.85	.65
202286CP	K14SM	.80"D x .60"H	.79	.69	.64
136240CP	KN145	.54"D x .52"H	.65	.55	.49
138392CP	PKG90B	.85"D x .56"H	.79	.59	.54

Color Code Legend
New Sale Qty. Save

Aluminum & Brass Threaded Standoffs

† Finish: Iridite (clear)[1] per MIL-C-5541-D; bright tin plate[2]; stainless steel[3]
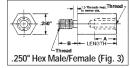
Hex .187"/.250" Female

Hex .250" Male/Female

.187" Hex Female (Fig. 1) | .250" Hex Female (Fig. 2) | .250" Hex Male/Female (Fig. 3)

.187" Hex Female
4-40 Thread (Fig. 1) .187" Hex

10 piece minimum

Part Number	Metal†	Hex Length	Pricing 10	100	1000
175636CP	Brass[2]	.187"	$.15	$.12	$.085
102795CP	Brass[2]	.240"	.21	.15	.10
133612CP	Alum[1]	.250"	.20	.14	.08
133639CP	Alum[1]	.500"	.22	.20	.11
139791CP	Alum[1]	.562"	.18	.15	.13
133647CP	Alum[1]	.625"	.14	.13	.11
133655CP	Alum[1]	.750"	.39	.23	.14
139184CP	Alum[1]	1.000"	.39	.32	.27

.250" Hex Female
4-40 Thread (Fig. 2) .250" Hex

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Metal†	Hex Length	Pricing 1	10	100	1000
139192CP	Alum[1]	.250"	✳	$.19	$.14	$.08
77500CP	Alum[1]	.375"	✳	.20	.15	.09
134762CP	Alum[1]	.437"	✳	.21	.18	.15
108370CP	Alum[1]	.500"	✳	.25	.17	.10
77518CP	Alum[1]	.625"	.45	.35	.23	.14
133604CP	Alum[1]	.750"	.41	.35	.18	.13
139205CP	Alum[1]	1.000"	.49	.35	.25	.15

.250" Hex Female
6-32 Thread (Fig. 2) .250" Hex

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Metal†	Hex Length	Pricing 1	10	100	1000
77534CP	Alum[1]	.250"	✳	$.22	$.14	$.08
133591CP	Alum[1]	.375"	✳	.29	.13	.09
77542CP	Alum[1]	.500"	✳	.22	.17	.10
77551CP	Alum[1]	.625"	✳	.25	.19	.14
77569CP	Alum[1]	.750"	✳	.28	.21	.13
77577CP	Alum[1]	1.000"	.59	.35	.30	.16
143407CP	Alum[1]	1.500"	.69	.61	.49	.42
143440CP	Alum[1]	1.750"	.79	.59	.48	.41

.250" Hex Male/Female
4-40 Thread (Fig. 3) (Thread A: 0.250"; B: 0.187")

✳ Prepackaged: order in increments of 10, 100 or 1000

Part Number	Metal†	Hex Length	Pricing 1	10	100	1000
77585CP	Alum[1]	.250"	✳	$.37	$.17	$.11
77593CP	Alum[1]	.375"	✳	.34	.22	.10
111755CP	Alum[1]	.500"	✳	.44	.36	.20
175628CP	Steel[3]	.580"	✳	.19	.14	.10
139213CP	Alum[1]	.625"	✳	.39	.35	.29
139221CP	Alum[1]	.750"	✳	.39	.35	.21
139230CP	Alum[1]	1.00"	.49	.44	.36	.30
128565CP	Alum[1]	1.25"	.59	.53	.44	.38
166545CP	Alum[1]	1.50"	.75	.65	.59	.41

.250" Hex Male/Female
6-32 Thread (Fig. 3) (Thread A: 0.375"; B: 0.250")

10 piece minimum

Part Number	Metal†	Hex Length	Pricing 10	100	1000
133541CP	Alum[1]	.250"	$.35	$.21	$.11
133567CP	Alum[1]	.375"	.35	.22	.12
77606CP	Alum[1]	.500"	.29	.23	.12
77622CP	Alum[1]	.750"	.35	.28	.15
77649CP	Alum[1]	1.000"	.40	.32	.17
206623CP	Steel[3]	1.250"	.34	.25	.15

See page 107 for Hardware Assortment Cabinet Kit.

See pages 207-213 for Jameco's new products.

SAE Hardware
- Zinc-plated steel

Prepackaged: order in increments of 100 or 1000

Slotted Pan Head Machine Screws

Part Number	Screw Size	Thread	Length (inches)	100 piece minimum 100	1000
38172CP	2-56	Std	.250	$.03	$.027
40951CP	4-40	Std	.250	.019	.011
40969CP	4-40	Std	.375	.019	.017
106809CP	4-40	Std	.500	.019	.017
106542CP	6-32	Std	.250	.019	.017
42446CP	6-32	Std	.375	.018	.016
42438CP	6-32	Std	.500	.03	.018
106796CP	8-32	Std	.500	.027	.024

Hex Nuts

Part Number	Screw Size	Thread	Length	100	1000
38164CP	2-56	Std	.183	$.03	$.025
211123CP	4-40	Sm	.184	.023	.011
40942CP	4-40	Std	.243	.023	.011
42420CP	6-32	Std	.306	.023	.014
51553CP	8-32	Std	.334	.028	.025

Flat Washers

Part Number	Screw Size		100	1000
211131CP	4	.237	$.024	$.018
106825CP	4	.281	.024	.018
106833CP	6	.373	.035	.018
106841CP	8	.377	.04	.018

Internal Tooth Lock Washers

Part Number	Screw Size		100	1000
106850CP	4	.258	$.018	$.015
106868CP	6	.277	.018	.015
106876CP	8	.323	.018	.015

Split Lock Washers

Part Number	Screw Size		100	1000
106788CP	2	.161	$.035	$.022
211140CP	4	.201	.025	.018
40977CP	4	.242	.025	.018
42462CP	6	.240	.018	.009
51609CP	8	.279	.04	.025

PCB Standoff Mounting Hardware

28337CP 129251CP 148056CP 156831CP

- Snap "on"
- Nylon

28337CP: 1.2"L x 0.6"W for 0.2" holes
129251CP: 0.9"L x 0.4"Dia. for 0.2"/0.3" holes
148056CP: 0.8"L x 0.5"W for 0.1"/0.2" holes
156831CP: 0.68"L x 0.32"Dia for 0.140" holes
157374CP: Rivet and Spreader: Size: (rivet) 0.3"L; (spreader): 0.25" x 0.117" Dia.

Spreader

Rivet

157374CP

SALE

✳ 10 pc. minimum

Part No.	Mfr. Cross Ref. No.	10	100	1000
28337CP	PCST	$.12	$.07	$.04
129251CP	PCST2	.18	.11	.075
148056CP	PCST3	.09	.07	.05
156831CP	KCS10	.12	.10	.063
157374CP	SR355	✳	.01	.006

3M Adhesive Rubber Feet

These are perfect for project boxes, providing a non-slip, non-scratch surface.

Fig. 1 Fig. 2 Fig. 3 Fig. 4   126981CP 119618CP

Part No.	Product No.	Type	Fig.	Pack	Dimensions (W" x H")	1	10	50
119618CP	SJ5012BLK4	Black cylindrical	1	4	.50 x .14	$.59	$.53	$.48
142658CP	SJ5012BLKC	Black cylindrical	1	100	.50 x .14	5.95	5.35	4.79
142771CP	SJ5008BLKC	Black tapered square	2	100	.50 x .12	5.95	5.35	4.79
142682CP	SJ5018BLKC	Black tapered square	3	100	.50 x .23	8.95	7.95	6.95
126981CP	SJ5023BLK4	Black tapered square	4	4	.81 x .30	1.95	1.75	1.59
142666CP	SJ5023BLKC	Black tapered square	4	100	.81 x .30	14.95	12.95	11.49

See page 105 for Spacers/Standoffs Assortments.

Call for OEM pricing

Gray Flat Ribbon Cable – 28 AWG

103481CP

- Single edge red stripe for pin 1 orientation
- Insulation: polyvinyl chloride (PVC) • 28 AWG (7 x 36) • Center spacing: 0.05"
- Voltage rating: 300V • Stranded copper wire • Temp. rating: -20°C to +80°C
- Prepackaged and priced in increments of 10', 25', 100' or 500'
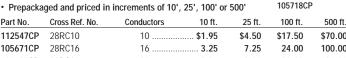
Part No.	Cross Ref. No.	Conductors	10 ft.	25 ft.	100 ft.	500 ft.
135538CP	171-10	10	$1.49	$3.20	$11.50	$47.50
37671CP	171-16	16	2.20	5.00	16.00	70.00
37719CP	171-20	20	1.95	4.50	16.00	65.00
37760CP	171-25	25	3.90	8.75	25.00	110.00
37807CP	171-26	26	3.49	8.00	25.00	120.00
37840CP	171-34	34	4.25	9.25	32.00	120.00
37911CP	171-37	37	5.90	11.75	32.00	125.00
37920CP	171-40	40	6.20	14.75	40.00	180.00
37954CP	171-50	50	6.75	14.50	49.00	210.00
103481CP	171-60	60	8.95	19.75	65.00	285.00

Multicolor Flat Ribbon Cable – 28 AWG

- Standard 10-color repeat sequence • 28 AWG (7 x 36)
- Center spacing: 0.05" • Voltage rating: 300V
- Temp. rating: -20°C to +80°C • Stranded copper wire

105718CP

- Prepackaged and priced in increments of 10', 25', 100' or 500'

Part No.	Cross Ref. No.	Conductors	10 ft.	25 ft.	100 ft.	500 ft.
112547CP	28RC10	10	$1.95	$4.50	$17.50	$70.00
105671CP	28RC16	16	3.25	7.25	24.00	100.00
105689CP	28RC20	20	3.95	9.00	30.00	125.00
105697CP	28RC25	25	6.29	14.25	49.95	219.95
105700CP	28RC34	34	6.50	13.00	43.00	175.00
105726CP	28RC40	40	8.69	19.553	69.49	299.95
105718CP	28RC50	50	10.95	24.95	85.95	384.95

Solid Hook-Up Wire – 22 AWG

- Temp. range: -55°C to +105°C • Passes UL VW-1 flame test
- MIL-W-16878D type B • Wt.: 100' (0.3 lbs.); 1000' (3.8 lbs.)
- For use with breadboards such as the JE20 series, pg 110

Part No.	Cross Ref. No.	Color	100 ft.	Part No.	Cross Ref. No.	Color	1000 ft.
36767CP	122BE/C	Blue	$4.49	36775CP	122BE/K	Blue	$29.95
36791CP	122BK/C	Black	4.49	36804CP	122BK/K	Black	35.95
36821CP	122G/C	Green	4.49	36839CP	122G/K	Green	29.95
36855CP	122R/C	Red	4.49	36863CP	122R/K	Red	34.49
36880CP	122W/C	White	4.49	36898CP	122W/K	White	39.99
36919CP	122Y/C	Yellow	4.49	36927CP	122Y/K	Yellow	29.95

Modular Telephone Cable – 28 AWG

103430CP

- Color coded conductors • Flat modular cable
- PVC jacket • Gray • 7 x 43 stranded

Part No.	Cross Ref. No.	Conductors	100 ft.	1000 ft.	10000 ft.
103430CP	MTC4	4	$3.30	$30.00	$250.00
103448CP	MTC6	6	7.00	50.00	430.00
103450CP	MTC8	8	10.00	62.00	450.00

2-Conductor Stranded Power/Speaker Cable – 24 AWG

- Black wire with white polarity stripe
- Temperature rating: 20°C to 60°C
- Stranded copper wire (7 x 32) • Operating voltage: 300V

Part No.	Cross Ref. No.	Wt. (lbs.)	100 ft.	Part No.	Cross Ref. No.	Wt. (lbs.)	1000 ft.
100280CP	224BK/C	0.8	$5.59	100298CP	224BK/K	7.8	$39.95

RG Type Bulk Coaxial Cable

RG58/U & RG58A/U (50Ω): Nom. cap.: 27pF/ft.; center resist.: 10.4Ω/1kft. @ 77°F
RG59/U (75Ω): Nominal capacitance: 19pF/ft.; center resist.: 16.5Ω/kft. @ 77°F
RG174/U (50Ω): Nominal capacitance: 30.8pF/ft.; center resist.: 97Ω/kft. @ 77°F

- Prepackaged and priced in increments of 100' or 1000'

Part No.	Cross Ref. No.	Description	100 ft.	1000 ft.
102226CP	RG58/U	For ethernet, oscilloscopes (solid 20AWG)	$12.00	$98.00
116898CP	RG58A/U	For ethernet, oscilloscopes (stranded 20AWG)	16.00	140.00
102218CP	RG59/U	For CATV & video patch cords (solid 22AWG)	13.00	110.00
112037CP	RG174/U	For ethernet, oscilloscopes (stranded 26AWG)	19.00	169.00

Category 5 Network Cable

118130CP

- 100MHz • 8C • 4 twisted pairs • UTP
- Insulation: polyethylene • Nom. OD.: 189"
- Nom. impedance: 100Ω

Solid: uses modular plug P/N 119343CP, pg 175
Stranded: uses modular plug P/N 79281CP, pg 175

- Prepackaged and priced in increments of 25' or 100'

24 AWG UTP Category 5 Enhanced – 350MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
176225CP	Solid (gray)	$5.00	$17.00	$100.00
176233CP	Stranded (gray)	6.00	21.00	180.00
201582CP	Stranded (blue)	6.00	18.00	160.00

24 AWG UTP Category 5 – 100MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
118113CP	Solid (gray)	$4.59	$16.49	$129.50
118130CP	Stranded (gray) (7/32 AWG)	5.95	19.35	164.50
201638CP	Stranded (blue) (7/32 AWG)	5.95	19.35	164.50

Multiconductor Shielded Computer Communication Cable – 24 AWG

- Stranded copper wire, multi-colored insulation
- Insulated with polyvinyl chloride (PVC)
- Voltage rating: 300V • Color: gray • Drain wire
- 24 AWG (7 x 32 AWG) • Shielded 100% w/ aluminum mylar
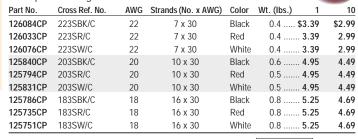
31843CP

- Prepackaged and priced in increments of 25' or 100'

Part No.	Cross Ref. No.	Conductors	Diameter	25 ft.	100 ft.	1000 ft.
31860CP	SC4	4	0.20"	$4.75	$17.00	$140.00
31878CP	SC9	9	0.23"	11.25	35.00	270.00
31843CP	SC15	15	0.28"	13.25	49.00	440.00
31851CP	SC25	25	0.37"	19.75	71.00	640.00

Stranded Hook-Up Wire – 18/20/22 AWG

300 Volts

- 80°C • PVC insulation • CSA: TR-64 • UL style: 1007
- Temperature range: -40°C to +80°C • Sold in 100' rolls

Part No.	Cross Ref. No.	AWG	Strands (No. x AWG)	Color	Wt. (lbs.)	1	10
126084CP	223SBK/C	22	7 x 30	Black	0.4	$3.39	$2.99
126033CP	223SR/C	22	7 x 30	Red	0.4	3.39	2.99
126076CP	223SW/C	22	7 x 30	White	0.4	3.39	2.99
125840CP	203SBK/C	20	10 x 30	Black	0.6	4.95	4.49
125794CP	203SR/C	20	10 x 30	Red	0.5	4.95	4.49
125831CP	203SW/C	20	10 x 30	White	0.5	4.95	4.49
125786CP	183SBK/C	18	16 x 30	Black	0.8	5.25	4.69
125735CP	183SR/C	18	16 x 30	Red	0.8	5.25	4.69
125751CP	183SW/C	18	16 x 30	White	0.8	5.25	4.69

Twisted Pair Cable – 24 AWG

- PVC insulation • Use for hook up wire • Stranded tinned wire (7 x 32)
- Reduced EMI • Wt.: 100' (0.5 lbs.); 1000' (4.7 lbs.) • 80C° • 300 V

Part No.	Cross Ref. No.	Color	100 ft.	Part No.	Cross Ref. No.	Color	1000 ft.
105911CP	224GW/C	Green/white	$5.49	105806CP	224GW/K	Green/white	$44.95
173147CP	224RW/C	Red/white	5.49	173155CP	224RW/K	Red/white	44.95
173163CP	224BW/C	Black/white	5.49	173171CP	224BW/K	Black/white	44.95

Kynar™ Wire Wrap Wire – 30 AWG
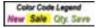
- Assorted color coded insulation • Used for prototyping
- Color coded Kynar™ (Polyvindene Fluoride) insulation
- Silver plated copper (solid conductor) • UL 1423
- Temperature: -40°C to +125°C • See pg 122 for sockets
- Wire wrap tools, pg 148 • Passes UL VW-1 flame test

22541CP

Part No.	Color	Wt. (lbs.)	100 ft.	Part No.	Color	Wt. (lbs.)	1000 ft.
22541CP	Blue	0.1	$4.95	22550CP	Blue	0.6	$29.95
22576CP	Black	0.1	4.95	22584CP	Black	0.6	29.95
22630CP	Red	0.1	4.95	22648CP	Red	0.6	29.95
22664CP	White	0.1	4.95	22672CP	White	0.6	29.95
22605CP	Green	0.1	4.95	22613CP	Green	0.6	29.95
22699CP	Yellow	0.1	4.95	22701CP	Yellow	0.6	26.95

Color Code Legend — New Sale Qty. Save

Nylon Cable Ties

Standard

70560CP

- Cable ties made from UL approved Nylon 66
- Temperature range: -40°C to +85°C
- Flammability rating: UL 94V-2
- Color: clear (except P/N 182676CP)
- *Sold in increments of 100 or 1000*

Part No.	Tensile Strength (lbs.)	Dimensions (L" x W")	100	1000
70560CP	18	3.1 x 0.10	$.025	$.015
126543CP	18	4.0 x 0.10	.02	.014
182676CP	18*	4.75 x 0.13	.035	.025
182650CP	18	5.5 x 0.13	.035	.025
139150CP	18	8.0 x 0.10	.05	.031
182668CP	18	8.0 x 0.13	.075	.05
182684CP	18	8.0 x 0.18	.036	.033
70906CP	40	5.8 x 0.10	.035	.029
190756CP	40	10.0 x 0.14	.099	.075
190772CP	40	11.0 x 0.19	.10	.07
190764CP	40	13.0 x 0.14	.10	.075

* Black

Weather Resistant

104141CP

- Contain Carbonate A for greater resistance to ultra violet rays in outdoor use
- Color: black
- *Sold in increments of 100 or 1000*

UV Resistant

Part No.	Tensile Strength (lbs.)	Dimensions (L" x W")	100	1000
139125CP	18	3.0 x 0.90	$.037	$.024
104141CP	18	4.0 x 0.10	.037	.024
104133CP	40	5.8 x 0.10	.047	.031
190781CP	40	8.0 x 0.13	.07	.06
190799CP	40	10.0 x 0.14	.10	.09
190801CP	40	13.0 x 0.14	.113	.088
139141CP	50	4.8 x 0.18	.05	.04

Cable Tie Assortments

- Tensile strength: 18-50 lbs.

145701CP

145701CP:
1000 pcs. (4"L); 10 colors
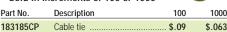
150412CP:
500 pcs. (4"L); 300 pcs. (8"L); 50 pcs. (11"L), 5 colors

145701CP (closeup)

Part No.	Weight (lbs.)	1	10	50
145701CP	0.7	$9.49	$8.49	$7.39
150412CP	1.7	13.95	11.49	9.95

AC Cord Cable Tie

- Reusable
- Length: 6"
- Color: black
- *Sold in increments of 100 or 1000*

Part No.	Description	100	1000
183185CP	Cable tie	$.09	$.063

Cable Tie Tool

- 2.5 - 5mm width (of cable)
- Tension adjustable
- Twist to cut surplus tie end
- Spring return action
- Plastic

SALE

Part No.	Description	1	10	100
182297CP	Cable tie tool	$12.25	$11.95	$11.75

Cable Tie Assorted Kits

195207CP: 50 pcs. assorted colors; 25 pcs. 8" and 25 pcs. 11"
195830CP: 25 pcs. each 3¾", 4¾", and 7½" clear
195194CP: 75 pcs. assorted colors; 25 pcs. each 3¾" white, 4¾" red and 7½" yellow
195215CP: 100 pc. wire management assortment; 30 pcs. 3" cable ties, 20 pcs. 4" cable ties, 9 pcs. each 14-16AWG and 10-12AWG wire connectors, 10 pcs. 14-18AWG wire connectors; 6 pcs. ³⁄₁₆", 8 pcs. each ¼" and ⅜" cable clamps

195207CP **195830CP** **195194CP** **195215CP**

Part No.	Mfr. Cross Reference No.	Description	1	10	50
195207CP	VP-50-811C	Cable tie assortment	$2.49	$2.24	$1.95
195830CP	BP-75 CLEAR	Cable tie assortment	1.95	1.75	1.58
195194CP	BP-75	Cable tie assortment	2.99	2.79	2.49
195215CP	BP-100	Cable ties, clamps, and wire connectors assortment	2.99	2.79	2.49

Cable Clamps

- Tie mount and screw tab cable clamps
- Material: UL approved nylon 66, 94V-2
- *Sold in increments of 10, 100 or 1000*

SALE

182941CP **182300CP** **182318CP** **182334CP** **134754CP** **173753CP**

Part No.	Mfr. Cross Reference No.	Description	10	100	1000
182941CP	0505HC-101S	Tie mount cable .75"D; 4-way self adhesive	$.07	$.055	$.042
182300CP	0510HC-2	Tie mount cable .5"D; 1/4" screw hole	.17	.15	.14
182318CP	0519ATC-17	Tie mount cable .7"D ADJ; 2-way #6 flat head screw	.59	.52	.46
182376CP	0519ATC-22	Tie mount cable .9"D ADJ; 2-way #6 flat head screw	.35	.30	.27
182334CP	0520FC-1	Tie mount cable .1"D; self adhesive	.17	.15	.12
182342CP	0520FC-2	Tie mount cable .2"D; self adhesive	.19	.15	.10
173711CP	UC0	Cable clamp for 1/8" cable	.09	.027	.018
173729CP	UC0.5	Cable clamp for 3/16" cable	.035	.032	.019
173737CP	UC1	Cable clamp for 1/4" cable	.14	.09	.065
173745CP	UC1.5	Cable clamp for 5/16" cable	.019	.017	.015
134754CP	BO375	Cable clamp for 3/8" cable	.09	.035	.018
173753CP	UC3	Cable clamp for 1/2" cable	.09	.039	.025

Nylon Cable Tie Mounts

- Screw tab & cradle mount adhesive
- *Sold in increments of 10, 100 or 1000*

70594CP

171213CP 71407CP 71394CP 71386CP

173761CP

Part No.	Description	10	100	1000
70594CP	0.8"L x 0.4"W screw 4-way cable tie, used w/ 0.2"W max	$.15	$.09	$.05
171213CP	0.5" square adhesive 4-way cable tie, used w/ 0.1"W max	.15	.11	.075
71407CP	0.9" square adhesive 4-way cable tie, used w/ 0.1"W max	.21	.19	.14
71394CP	1.1" square adhesive 4-way cable tie, used w/ 0.2"W max	.23	.19	.14
71386CP	1.1" square adhesive 2-way cable tie, used w/ 0.4"W max	.29	.22	.15
173761CP	0.6"L x 0.4"W cable tie, saddle type	.15	.125	.075

Nylon Cable ID Ties and Tabs

71061CP

135175CP

71061CP: Clear ID tab (0.98" x 0.31")
182692CP: White ID tab (18 lb. tensile strength)
135175CP: Nylon cable tie ID marker
- *Sold in increments of 10, 100 or 1000*

Part No.	Size	10	100	1000
71061CP	4.0"L x 0.1"W	$.10	$.08	$.072
182692CP	8.0"L x .10"W	.14	.08	.06
135175CP	2.0"L x 0.8"W x .02"T	.20	.135	.10

Cable Markers

- UL approved natural nylon
- *10 piece minimum*

Part No.	Size	10	100	1000
182705CP	1.5"L x .75"W	$.12	.11	.10
182713CP	2.5"L x 1.76"W	.23	.25	.27

Self Adhesive Wire Marker

- Stick to wires for permanent identification
- Cloth tape label numbered 0-9
- Used extensively for cable diameter after or before terminal attachment

Part No.	Product No.	1	10
182262CP	0215WMB-1	$9.95	$8.95

3M Tape Wire Marker

- For marking wires with numerical sequence
- Self adhesive tapes numbered 0-9
- Size: (tape) 96"L x 0.25"W

Part No.	Description	1	10
159231CP	Numerical tape dispenser	$30.95	$27.85

Call for OEM pricing – we carry major manufacturers.

Nail-In Cable Clips

190810CP   **190861CP**

- Material: impact resistant PE   • With nails inserted
- **Sold in increments of 100 or 1000**

For telephone cords; white
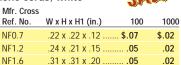
Part No.	Mfr. Cross Ref. No.	W x H x H1 (in.)	100	1000
190810CP	NF0.7	.22 x .22 x .12	$.07	$.02
190828CP	NF1.2	.24 x .21 x .15	.05	.02
190836CP	NF1.6	.31 x .31 x .20	.05	.02
190844CP	NF2.0	.33 x .31 x .20	.015	.013
190852CP	NF2.8	.59 x .50 x .34	.05	.02

For general round cables; gray
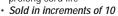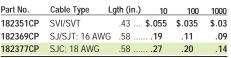
Part No.	Mfr. Cross Ref. No.	W x H x H1 (in.)	100	1000
190861CP	NCO.35N	.14 x .23 x .15	$.085	$.035
190879CP	NC0.5N	.20 x .30 x .21	.05	.02
190887CP	NC1N	.24 x .35 x .26	.085	.035
190895CP	NC2N	.31 x .45 x .34	.05	.02
190908CP	NC3N	.39 x .53 x .41	.05	.02

Round-Type Strain Relief Bushings

- Material: UL approved nylon 66, 94V-2
- Color: black
- Used extensively for protecting cords and to prolong cord life
- **Sold in increments of 10**

182369CP

Part No.	Cable Type	Lgth (in.)	10	100	1000
182351CP	SVI/SVT	.43	$.055	$.035	$.03
182369CP	SJ/SJT; 16 AWG	.58	.19	.11	.09
182377CP	SJC; 18 AWG	.58	.27	.20	.14

Bushing Assembly Tool

- For use with strain relief bushings, above

Part No.	Description	1	10	100
73470CP	Bushing tool	$31.95	$28.75	$25.85

Wire Connectors

182449CP   **182511CP**   **140716CP**

- Material: UL approved nylon 66, 94V2
- Quick and secure method to splice control wires
- Strip wire before application
- Twist on type
- Material: PVC with metal spring, except P/N 182449CP nylon 66, 94-2 and P/N 140716CP PE - metal inside
- **182449CP:** UL/CSA approved
- **Sold in increments of 10, 100 or 1000**

Part No.	Description	Color	10	100	1000
182449CP	Crimp 16-14 AWG*	Natural	$.06	$.055	$.049
182502CP	Wire-nut 16 AWG	Gray	.035	.03	.025
182511CP	Wire-nut 16 AWG	Blue	.05	.038	.026
140716CP	Wire IDC 22-18 AWG	Red	.15	.10	.075

* Requires crimping tool (P/N 72995CP, pg 151)

Heat Shrink Tubing

- 2:1 uniform shrink ratio
- Color: black
- Temperature range: -45°C to +125°C
- Shrink temp.: 175°C
- **Precut 39" length; sold as 1 increment**

72063CP

PVC Heat Shrink Flat Film

Part No.	Flat	Unshrunk Cir. Dia.	Shrunk Cir. Dia.	1*	10*	100*
70631CP	5/16"	1/4"	1/8"	$1.69	$1.55	$1.39
70623CP	1/2"	5/16"	3/16"	1.69	1.29	.89
70666CP	13/16"	9/16"	1/4"	1.69	1.55	1.39

Polyolefin Heat Shrink Tubing

- Dielectric strength: 1300V   • Flexible
- Shrink temperature: 121°C   • Flame retardant
- **Precut 39" length; sold as 1 increment**

Part No.	Before	After (Dia.)	1*	10*	100*
71327CP	1/16"	1/32"	$.59	$.51	$.46
71870CP	3/32"	3/64"	.59	.49	.44
71280CP	1/8"	1/16"	.69	.59	.54
72063CP	1/4"	1/8"	.99	.81	.72

PVC Heat Shrink Tubing

- 2:1 uniform shrink ratio
- Color: black
- Shrink temp: 125°C
- **Sold in 10' and 100' increments**

182748CP
182772CP

Part No.	Dia. before (mm)	10 ft.	100 ft.
184721CP	.12" (3)	$1.19	$10.50
182730CP	.16" (4)	1.39	12.50
182748CP	.20" (5)	1.45	13.00
182756CP	.24" (6)	1.49	13.50
182764CP	.31" (8)	1.79	16.00
182772CP	.43" (11)	2.80	19.00
182781CP	.59" (15)	3.50	30.00

TECHFLEX. Cable Sleeve

Clean Cut Expandable Sleeving

- Flame resistant
- Applications: protecting wires, cables and hoses
- Operating temp.: -70°C to 125°C
- **Sold in spools of 25'**

162157CP

Part No.	Product No.	Actual/Expanded Dia.	1	10
162157CP	CCPT2X	.250"/.440"	$16.95	$15.95
162165CP	CCPT3X	.500"/.750"	17.95	14.49

171-Pc. Solderless Terminal Kit

- Clear, hinged plastic box
- Use crimping tool P/N 72995CP, pg 151

170 Terminals and Connectors!

Qty.	Description	Wire Gauge	Blade Size	Qty.	Description	Wire Gauge	Blade Size
10	Male spade	16-22	1/4"	10	Ring term.	14-16	#10
10	Male spade	14-16	1/4"	5	Ring term.	10-12	#10
10	Fem. spade	16-22	1/4"	5	Ring term.	10-12	#14
10	Fem. spade	14-16	1/4"	10	Spade term.	16-22	#6
10	Ring term.	16-22	#6	10	Spade term.	16-22	#8
10	Ring term.	16-22	#8	10	Spade term.	14-16	#10
10	Ring term.	16-14	#10	10	Butt conn.	16-22	–
15	Ring term.	14-16	#6	10	Butt conn.	14-16	–
10	Ring term.	14-16	#8	5	Butt conn.	10-12	–

Part No.	Description	1	10	25
10989CP	Terminal kit	$8.95	$7.95	$7.25

Heat Gun/Stripper
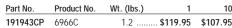
Dual-Setting

- Use with heat shrink material
- Works with spot-dry paint, plaster, spackle cure adhesives
- Will remove adhesive-applied tiles and linoleum without chipping
- Dual heat setting: 600°F/1100°F
- Thaw pipes, frozen locks and loosen rusted bolts
- UL listed   • Weight: 1.8 lbs.   • Size: 9.3"L x 7.0"W

Part No.	Description	1	10	25
76865CP	Heat gun	$39.95	$35.95	$31.95
217816CP	Heat shrink attachment	1.95	1.85	1.75
217832CP	Air spreader	1.95	1.85	1.75

Weller® 250-Watt, 3-Setting Industrial Heat Gun

- 750°F to 800°F hot air at nozzle; 3-position switch; hot-off-cool
- Designed for assembly and repair applications such as shrink tubing and vinyl, epoxy curing/drying/cooling
- 120VAC @ 60Hz   • ESD safe
- Long-life heater and fan components
- 3-wire grounded plug; 6' cord

Part No.	Product No.	Wt. (lbs.)	1	10
191943CP	6966C	1.2	$119.95	$107.95

WAHL® 1,200°F Portable Heat Gun

ETL listed

- Portable and flameless heat
- Temperatures up to 1,200°F (650°C)
- Typical applications: shrink tubing, activate adhesives and potting compounds, form plastics and laminates and preheat flux
- Each cartridge (disposable butane lighter) provides approximately 20 minutes of heat
- Includes disposable gas lighter
- Electronic ignition
- Size: 4.8"L x 0.9"W   • One-year warranty
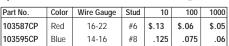
Part No.	Description	1	10
150691CP	Portable flameless heat gun	$26.95	$24.25

Insulated Solderless Terminals
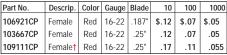
- Insulation thickness: .030"
- Funnel ramp entry   • Temperature to 105°C
- Use with crimping tool P/N 72995CP, pg 151

Ring Solderless

Part No.	Color	Wire Gauge	Stud	10	100	1000
103683CP	Red	16-22	#6	$.11	$.07	$.05

Spade Solderless

Part No.	Color	Wire Gauge	Stud	10	100	1000
103587CP	Red	16-22	#6	$.13	$.06	$.05
103595CP	Blue	14-16	#8	.125	.075	.06
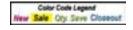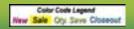
Disconnect Solderless

103667CP   109111CP

Part No.	Descrip.	Color	Gauge	Blade	10	100	1000
106921CP	Female	Red	16-22	.187"	$.12	$.07	$.05
103667CP	Female	Red	16-22	.25"	.12	.07	.05
109111CP	Female†	Red	16-22	.25"	.17	.11	.055

† includes hood

Color Code Legend
New   Sale   Qty. Save   Closeout
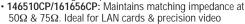
We carry major manufacturers – call for OEM PRICING.

BNC Coax Connectors *SALE*

• Miniature, lightweight units designed to operate up to 11GHz and typically yield low reflection up to 4GHz

Part No.	Fig.	Description	1	10	100	500
71458CP	1	BNC male terminator (50Ω)	$1.55	$1.15	$.99	$.89
71790CP	1	BNC male terminator (75Ω)	1.35	1.09	.89	.73
102306CP	1	BNC male terminator (93Ω)	.36	.33	.29	.26
135618CP	2	BNC male with pin and ferrule (RG6)	.89	.69	.45	.39
71482CP	2	BNC male with pin and ferrule (RG58)	1.49	1.35	1.25	1.09
71271CP	2	BNC male with pin and ferrule (RG59/62)	1.39	1.15	.85	.59
112109CP	2	BNC male with pin and ferrule (RG174)	1.59	1.45	1.29	1.15
119394CP	3	BNC male clamp-on (RG59/62)	1.39	1.25	1.15	.89
108994CP	4	BNC male twist-on (RG58)	1.49	1.19	.89	.65
71781CP	4	BNC male twist-on (RG59/62)	1.09	.99	.89	.79
71589CP	5	BNC female panel mount (UG-1094A)	1.49	1.35	1.25	1.09
71909CP	6	BNC female/female coupler (UG-914)	1.29	.99	.85	.74
127343CP	7	BNC male/male coupler (UG-491B/U)	1.69	1.55	1.39	1.25
111561CP	8	BNC female isolated bulkhead	2.29	1.99	1.79	1.59
148224CP	9	BNC female bulkhead feed-thru.	1.69	1.55	1.39	1.25
148232CP	9	BNC female isolated bulkhead feed-thru.	2.29	2.09	1.85	1.69
127351CP	10	BNC M-F right angle (DG-306B/O)	2.49	2.19	1.85	1.59
160928CP	11	BNC female, crimp type (RG58)	1.25	1.09	.99	.89
161921CP	11	BNC female, crimp type (RG174)	1.49	1.35	1.19	1.05
174289CP	12	BNC female chassis mount	1.45	1.29	1.15	.99
174297CP	13	BNC female twist-on bulkhead	2.25	1.95	1.79	1.59
174271CP	14	BNC female right-angle chassis mount	.85	.75	.65	.59
174254CP	15	BNC male to F connector female	1.69	1.55	1.39	1.25
207183CP	16	BNC male to RG58/59 crimp on....................	4.99	4.49	3.99	3.59

Figure 1 | Figure 2 | Figure 3
Figure 4 | Figure 5 | Figure 6 | Figure 7
Figure 8 | Figure 9 | Figure 10
Figure 11 | Figure 12 | Figure 13
Figure 14 | Figure 15 | Figure 16

BNC PCB Connectors *SALE*

• **146528CP:** Ideal for applications where multiple insertions require a connector which can endure the stress of high torque
• **146510CP/161656CP:** Maintains matching impedance at 50Ω & 75Ω. Ideal for LAN cards & precision video

146528CP | 146510CP | 210884CP | 161656CP

Part No.	Description	Length (L)	1	10	100	500
146528CP	BNC straight metal	.719"	$2.79	$2.55	$2.29	$2.05
210884CP	BNC straight/panel mount metal	.830"	2.29	1.99	1.79	1.59
146510CP	BNC right-angle plastic insulation	1.37"	1.95	1.75	1.49	1.25
161656CP	BNC right-angle metal	.861"	2.29	1.99	1.79	1.59

BNC Adapters

118594CP | 207108CP | 72629CP | 100589CP | 100597CP

Application: gen. purpose coax T-adapter; ThinNet/Ethernet LAN adapter   • Silver-plated

Part No.	Description	1	10	100	500
118594CP	Male to female/female T-adapter	$2.39	$1.91	$1.43	$1.00
207108CP	Quad female adapter	3.99	3.49	2.99	2.49
207095CP	Female to male/male T-adapter	5.95	5.35	3.99	3.49
72629CP	Female to female/female T-adapter	2.29	2.09	1.79	1.49
207087CP	Female to male/female T-adapter	9.95	8.95	6.45	5.79
207132CP	Female to bulkhead female (rt. angle)	4.95	4.45	3.19	2.89
100589CP	Male to female/female T-adapter (90°)	3.95	3.55	3.19	2.89
100597CP	Male to female/female T-adapter (180°)	5.79	5.25	4.69	4.25
207116CP	Male to female/female/female T-adapter..............	7.95	7.15	6.45	5.79
117461CP	Male to female/female F-adapter (90°)	3.99	3.59	3.15	2.75
207124CP	Male/male to female/female T-adapter................	4.99	4.49	3.99	3.59
188411CP	Straight jack-to-jack (Amphenol)*	2.99	2.49	1.59	1.39
188429CP	Jack-plug-jack (Amphenol)*	4.69	3.99	2.99	2.39
188402CP	Gasketed jack-to-jack (Amphenol)*	3.49	3.15	2.79	2.49
207167CP	RCA female to BNC female	1.99	1.79	1.59	1.39
114788CP	RCA female to BNC male adapter	1.35	1.05	.99	.98
207175CP	RCA male to BNC male	1.99	1.79	1.59	1.39
114753CP	RCA male to BNC female adapter	1.59	1.45	1.29	1.19
114770CP	BNC female to "F" connector male adapter	1.79	1.59	1.39	1.19
207141CP	3.5mm mono male to BNC female	1.99	1.79	1.59	1.39
207159CP	2.5mm mono male to BNC female	2.99	2.69	2.39	1.99

117461CP | 188411CP | 188402CP | 114788CP | 114753CP | 114770CP

* Frequency range: 0-4GHz with low reflection

BNC & Type N 50Ω Cable Plugs

BNC 3-Piece
Amphenol
• Silver-plated
• Frequency Range: 0 – 4GHz with low reflection
• Attachment (outer/inner): crimp/crimp
188306CP: RG58/184
188349CP: RG174/188/316

188306CP | 188349CP   *SALE*

Part No.	Amphenol No.	1	10	50	100
188306CP	31-320-RFX	$1.69	$1.29	$.95	$.79
188349CP	31-315-RFX	1.99	1.55	1.05	.91

Type N
• Silver-plated
• RG58/141
• Attachment (outer/inner): crimp/crimp

Part No.	Amphenol No.	1	10	50	100
188445CP	82-5375-RFX	$4.19	$3.19	$2.39	$2.19

F-Type 75Ω Coax Cable
• Low signal loss
• Strain relief
• Male to male F-type

Part No.	Cable	Lgth (ft.)	1	10	50	100
85585CP	RG59	3	$2.39	$1.89	$1.39	$.99
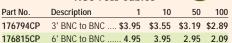
BNC Coax Cables

181307CP **152311CP** **85542CP**

• Male coax connectors

RG6 75Ω Cables

Part No.	Description	1	10	50	100
176794CP	3' BNC to BNC	$3.95	$3.55	$3.19	$2.89
176815CP	6' BNC to BNC	4.95	3.95	2.95	2.09

RG58/U 50Ω Cables

• For Ethernet networks, oscilloscopes

Part No.	Mfr. Cross Ref. No.	Lgth (ft.)	1	10	50	100
181307CP	CRG58-1RR	1	$3.15	$2.85	$2.55	$2.35
102314CP	CRG58-1	1.5	3.29	2.99	2.69	2.19
11404CP	CRG58-3	3	3.95	3.59	3.25	2.89
102331CP	CRG58-6	6	3.69	3.29	2.99	2.69
152311CP	RG58MF-6*	6	2.95	2.59	2.25	1.95
180822CP	CRG58-10	10	4.49	3.59	2.69	1.89
102349CP	CRG58-12	12	4.95	4.49	3.99	3.39
169818CP	CRG58-15	15	5.49	4.39	3.29	2.35
102357CP	CRG58-25	25	6.49	5.85	5.29	4.75
102365CP	CRG58-50	50	9.49	8.55	7.69	6.89
102381CP	CRG58-100	100	13.49	10.79	8.09	5.69

*152311CP has male and female coax connectors

RG59/U 75Ω Cables

• For CATV and video patch cords

Part No.	Mfr. Cross Ref. No.	Lgth (ft.)	1	10	50	100
86471CP	CRG59-1	1.5	$2.85	$2.59	$2.35	$2.09
85542CP	CRG59-6	6	3.39	2.99	2.69	2.19
102373CP	CRG59-12	12	5.19	4.69	3.99	2.99

RG174/U 50Ω Cables

• For Ethernet networks, oscilloscopes

Part No.	Mfr Cross Ref. No.	Lgth (ft.)	1	10	50	100
111472CP	RG174U3	3 ...	$3.85	$3.49	$3.15	$2.85
111481CP	RG174U6	6	4.59	4.15	3.75	3.35

SMA/SMB 50Ω Coax Cables

Fig. 1 **Fig. 2** **Fig. 3** **Fig. 4**

Fig. 1: SMA male to SMA male
Fig. 2: SMA male to SMA right angle male
Fig. 3: SMA right angle male to SMA right angle male
Fig. 4: SMB male to SMB male

Part No.	Cable	Fig.	Lgth (ft.)	1	10	50
159370CP	RG58	1	2	$4.49	$3.99	$3.49
159396CP	RG58	1	6	5.49	4.89	4.19
169800CP	RG174	1	4.29	4.79	4.35	3.89
163854CP	RG174	1	1	4.49	3.95	3.39
153381CP	RG174	1	2	4.95	4.29	3.39
153390CP	RG174	1	4	5.49	4.75	4.29
159450CP	RG174	1	6.29	6.79	6.15	5.55
175126CP	RG174	2	0.5	4.49	3.95	3.49
175134CP	RG174	2	1	4.95	4.25	3.75
175142CP	RG174	3	0.5	5.75	5.25	4.49
175151CP	RG174	3	1	6.25	5.75	4.75
175169CP	RG174	4	0.5	4.25	3.19	2.25
175177CP	RG174	4	1	5.29	4.79	3.95

SMA Connectors, Adapters and Couplers

157972CP **153365CP** **145381CP** **145373CP** **153285CP** **159530CP** **160021CP** **160012CP**

188509CP **188525CP** **153453CP** **159468CP** **153592CP** **159476CP** **153293CP** **161277CP** **161293CP**

161306CP

• Application: cellular phone, data communication, instrumentation, and video • 50Ω impedance
• Frequency range: 0-18GHz • Temperature range: -65°C to 165°C • Plating: gold and nickel

Connectors

Part No.	Description	Cable Type	Plated	1	10	50	100
157972CP	SMA 50Ω crimp type male plug connector	RG58	Gold	$3.99	$3.59	$3.29	$2.99
153365CP	SMA 50Ω crimp type male plug connector	RG174	Gold	3.99	3.59	3.15	2.85
145381CP	SMA straight female PCB mount connector, 4 legs	—	Gold	5.25	4.75	4.25	3.49
145373CP	SMA 90° female PCB mount connector, 4 legs	—	Gold	6.95	6.29	5.65	5.09
153285CP	SMA bulkhead solder female w/ washer, rear mount	RG58/174	Gold	3.29	2.99	2.69	2.45
159530CP*	SMA female panel mount conn., 4 mounting holes	RG58/174	Gold	2.95	2.65	2.35	2.10
160021CP*	SMA female panel mount conn., 2 mounting holes	RG58/174	Gold	3.99	3.59	3.25	2.95
160012CP	Panel mount feed thru connector female – female	—	Nickel	4.49	4.05	3.65	3.29
188509CP	SMA PCB straight jack	—	Gold	3.69	3.35	2.99	2.69
188525CP	SMA PCB right angle jack	—	Gold	5.95	4.95	3.79	3.19

*159530CP/160021CP: Solder cup

SMA/BNC Adapters

Part No.	Description	Cable Type	Plated	1	10	50	100
153453CP	SMA female to BNC male adapter	—	Nickel ...	$2.49	$2.25	$1.99	$1.79
159468CP	SMA female to BNC female adapter	—	Nickel ...	2.69	2.45	2.19	1.99
153592CP	SMA male to BNC male adapter	—	Nickel ...	3.39	3.05	2.75	2.49
159476CP	SMA male to BNC female adapter	—	Nickel ...	2.99	2.69	2.45	2.19
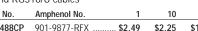
Couplers

Part No.	Description	Cable Type	Plated	1	10	50	100
153293CP	SMA straight coupler female – jack-to-jack	—	Gold	$3.35	$2.99	$1.89	$1.59
161277CP	3-way coupler, 1 male – 2 female	—	Gold	3.49	3.15	2.85	2.45
161293CP	Straight coupler male – male	—	Gold	3.15	2.85	2.55	2.35
161306CP	Right angle coupler male – female	—	Gold	4.25	3.85	3.45	2.99

SMA Brass Plug

• Frequency range: 0-18GHz
• Outer cable attachment: crimp
• Inner cable attachment: solder
• Construction: captive contact
• Type: crimp plug
• For RG174/U, RG188/U,
and RG316/U cables

Amphenol

Part No.	Amphenol No.	1	10	50
188488CP	901-9877-RFX	$2.49	$2.25	$1.99

SMB PCB Connector

• 0-4GHz electrical performance
• Gold plated brass
• Insulation: teflon
• Contact: beryllium copper

Part No.	Description	1	10	50
167311CP	Fem. right angle PCB ..	$4.75	$4.29	$3.69

SMB PCB Jack Connectors

• SMB bulkhead jacks for RG-174 cable
• 50Ω crimp type
• Gold plated
• Use with crimping tool P/N 114534CP, pg 151
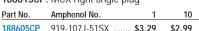
172363CP

Part No.	Description	1	10	50
172363CP	Bulkhead crimp female	$3.49	$2.95	$2.49
172371CP	Bulkhead crimp male	4.29	3.89	3.49

MCX Crimp Attachments for Flexible Cable
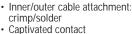
• For RG174/U,188/U, 316/U cable
• Frequency range: 0-6GHz
• Mating: 50Ω snap-on coupling
• Temperature range: -65°C to +165°C
• Outer/inner cable attachment: crimp/solder
• Construction: gold plated
188605CP: MCX crimp jack
188613CP: MCX right angle plug

188605CP

Amphenol

SALE

188613CP

Part No.	Amphenol No.	1	10	50
188605CP	919-107J-51SX	$3.29	$2.99	$2.69
188613CP	919-104P-51AX	3.59	3.25	2.95

MicroMate™ (MMCX) Connectors

• Frequency range: DC thru 6GHz
• Temperature range: -40°C thru 90°C
• Inner/outer cable attachment: crimp/solder
• Captivated contact
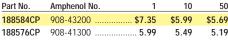
SALE

188576CP

Amphenol

188576CP: Straight for RG174/U, 188/U, 316/U cable
188584CP: Right angle for RG178/U, 196/U cable

188584CP

Part No.	Amphenol No.	1	10	50
188584CP	908-43200	$7.35	$5.99	$5.69
188576CP	908-41300	5.99	5.49	5.19

Solder Tail Low Profile Sockets

- Material: beryllium copper or phosphor bronze
- Contact current: 1A
- Tin-plated contacts and tails
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Sleeve material: brass
- Thru-hole lead length: .140" (A)
- Body height: .188" (B)

37372CP

single wipe | dual wipe

Single Wipe

- Prepackaged: order in increments of 10, 100 or 1000
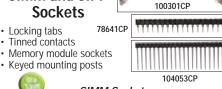
Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	10	100	1000
51570CP	8LP	8	0.3	$.07	$.06	$.05
37161CP	14LP	14	0.3	.09	.07	.06
37372CP	16LP	16	0.3	.10	.09	.06
38113CP	18LP	18	0.3	.11	.08	.06
38607CP	20LP	20	0.3	.12	.10	.07
39132CP	22LP	22	0.4	.12	.10	.07
39378CP	24SLP	24	0.3	.17	.12	.06
39335CP	24LP	24	0.6	.16	.11	.06
40301CP	28LP	28	0.6	.19	.13	.09
41110CP	40LP	40	0.6	.19	.17	.12

Dual Wipe

- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	10	100	1000
112192CP	6LPD	6	0.3	$.09	$.06	$.05
112205CP	8LPD	8	0.3	.09	.08	.07
112213CP	14LPD	14	0.3	.10	.075	.05
112221CP	16LPD	16	0.3	.13	.115	.095
112230CP	18LPD	18	0.3	.16	.14	.12
112248CP	20LPD	20	0.3	.17	.14	.11
112281CP	24SLPD	24	0.3	.17	.13	.09
112264CP	24LPD	24	0.6	.19	.14	.10
112299CP	28SLPD	28	0.3	.21	.19	.17
112272CP	28LPD	28	0.6	.21	.17	.12
112301CP	32LPD	32	0.6	.18	.14	.10
112310CP	40LPD	40	0.6	.26	.23	.19
167396CP	48LPD	48	0.6	.35	.32	.29
112326CP	64LPD	64	0.9	.39	.29	.19

SIMM and SIPP Sockets

- Locking tabs
- Tinned contacts
- Memory module sockets
- Keyed mounting posts

100301CP
78641CP
104053CP

SIMM Sockets

Part No.	Description	1	10	100	500
100301CP	Single x 30-pin, vert.	$.99	$.89	$.69	$.59
72531CP	Dual x 30-pin, vert.	.25	.15	.12	.09
203203CP	Single x 68-pin vert.	.89	.75	.59	.49
72426CP	Single x 72-pin vert.	1.10	.88	.66	.46

SIPP Sockets

Part No.	Description	1	10	100	500
102200CP	Single x 10-pin	$.26	$.21	$.16	$.11
192840CP	Single x 11-pin	.49	.39	.29	.21
78641CP	Single x 30-pin	.89	.80	.68	.61
175919CP	Single x 36-pin	1.19	1.09	.97	.87
101282CP	Single x 20-pin WW2†	1.49	1.19	.89	.65
104053CP	Single x 30-pin WW3*	1.95	1.75	1.49	1.35

† Lead length: .435"(2)   * Lead length: .575" (3)

Level 1, 2 & 3 Wire Wrap Sockets

- Contact plating/leads: gold (WW) or tin (TWW); Dual Wipe
- Material: beryllium copper or phosphor bronze
- Contact current: 1A
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Sleeve material: brass
- Thru-hole lead length: .315" (L1); .438" (L2); .638" (L3)
- Body height: .300" (A)

37233CP

Gold (WW)

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
51641CP	8WW2	8	0.3	$1.25	$1.09	$.99	$.89
196832CP	14WW1	14	0.3	1.25	.99	.75	.55
37233CP	14WW2	14	0.3	1.49	1.35	1.19	1.09
37479CP	16WW2	16	0.3	1.75	1.59	1.43	1.29
196859CP	18WW3	18	0.3	1.95	1.59	1.19	.85
38674CP	20WW2	20	0.3	2.25	1.99	1.82	1.65
39394CP	24WW2	24	0.6	1.95	1.73	1.51	1.40
40352CP	28WW2	28	0.6	2.35	2.07	1.81	1.69
41187CP	40WW2	40	0.6	3.15	2.80	2.45	2.29

Tin (TWW)

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
112660CP	8TWW2	8	0.3	$.49	$.45	$.38	$.34
37217CP	14TWW2	14	0.3	1.15	1.03	.93	.84
196841CP	14TWW3	14	0.3	.95	.75	.57	.39
37436CP	16TWW2	16	0.3	.99	.89	.73	.66
87636CP	18TWW2	18	0.3	1.09	.98	.81	.73
75379CP	20TWW2	20	0.3	1.69	1.52	1.35	1.23
75416CP	24TWW2	24	0.6	1.49	1.19	.89	.63
75424CP	28TWW2	28	0.6	2.19	1.95	1.79	1.59
41179CP	40TWW2	40	0.6	2.59	2.22	1.85	1.69

Wire Wrap Socket I.D. Markers

- Quick identification of pin numbers
- Slips onto socket before wrapping
- Plastic
- Can easily write location, part number or function

37145CP

Part No.	Prod. No.	Pins	Width (in.)	1	10	100	500
51561CP	8ID	8	0.3	$.39	$.30	$.25	$.22
37145CP	14ID	14	0.3	.35	.31	.28	.24
37356CP	16ID	16	0.3	.35	.31	.28	.24
38105CP	18ID	18	0.3	.55	.49	.41	.32
38586CP	20ID	20	0.3	.55	.49	.39	.35
39327CP	24ID	24	0.6	.55	.52	.41	.32
40299CP	28ID	28	0.6	.65	.55	.45	.41
41101CP	40ID	40	0.6	.89	.75	.65	.60

PLCC Solder Tail Sockets

- Solder tail allows through-hole board patterns in .100" grid
- Accepts JEDEC type "A" plastic leaded chip (0.05" centers)
- Thru-hole lead length: .125"
- Body height: .375"

71968CP

Part No.	Mfr. Cross Ref. No.	Pins	1	10	50	100
71263CP	G1P428	28	$.56	$.44	$.34	$.29
71811CP	G1P432	32	1.15	.99	.81	.54
71618CP	G1P444	44	1.15	.99	.81	.69
72442CP	G1P452	52	1.15	.91	.75	.63
71968CP	G1P468	68	1.15	.99	.89	.79
71976CP	G1P484	84	1.29	1.15	.90	.59

Machine Tooled Solder Tail Low Profile Sockets

- Contact plating: gold
- Tin-plated leads
- Contact current: 3A
- Multiple contact elements
- Material: beryllium copper or phosphor bronze
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Sleeve material: brass
- Thru-hole lead length: .177" (A)
- Body height: .117" (B)

65584CP

Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	1000
167003CP	6MLPT	6	0.3	$.29	$.26	$.18	$.16
51625CP	8MLP	8	0.3	.25	.22	.19	.17
37196CP	14MLP	14	0.3	.42	.38	.33	.30
37401CP	16MLP	16	0.3	.47	.43	.37	.34
65584CP	18MLP	18	0.3	.55	.49	.43	.39
38623CP	20MLP	20	0.3	.59	.55	.45	.39
192209CP	224SMLP	22	0.4	.59	.49	.35	.25
39386CP	24SMLP	24	0.3	.71	.57	.43	.30
39351CP	24MLP	24	0.6	.75	.60	.45	.32
114411CP	28SMLP	28	0.3	.85	.75	.65	.55
184680CP	284SMLP	28	0.4	.85	.75	.65	.55
40328CP	28MLP	28	0.6	.83	.75	.65	.59
105380CP	32MLP	32	0.6	.95	.85	.75	.65
41136CP	40MLP	40	0.6	1.19	1.05	.79	.69
42059CP	48MLP	48	0.6	1.39	1.15	.83	.58
200707CP	64MLP	64	0.9	1.89	1.69	1.53	1.37

Level 2 & 3 Machine Tooled Wire Wrap Sockets

- Contact plating: gold
- Tin-plated leads
- Contact current: 3A
- Contact resistance: less than 5mΩ
- Dielectric withstanding voltage: 300Vrms
- Material: beryllium copper or phosphor bronze
- Insulation resistance: greater than 1000MΩ
- Insulator: glass-filled polyester or glass-filled polyphenylene sulfide
- Sleeve material: brass
- Thru-hole lead length: .365" (L2); .515" (L3)
- Body height: .115" (A)

37410CP
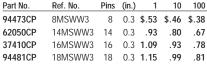
Part No.	Mfr. Cross Ref. No.	Pins	Width (in.)	1	10	100	500
94473CP	8MSWW3	8	0.3	$.53	$.46	$.38	$.34
62050CP	14MSWW3	14	0.3	.93	.80	.67	.60
37410CP	16MSWW3	16	0.3	1.09	.93	.78	.69
94481CP	18MSWW3	18	0.3	1.15	.99	.81	.73
38631CP	20MSWW3	20	0.3	1.33	1.14	.95	.86
185324CP	22MSWW3	22	0.3	1.49	1.19	.89	.63
192831CP	224MSWW3	22	0.4	1.49	1.19	.89	.63
105371CP	24SMSWW3	24	0.3	1.60	1.39	1.19	1.03
196867CP	24MSWW2	24	0.6	1.49	1.19	.89	.65
94490CP	24MSWW3	24	0.6	1.60	1.45	1.35	1.19
200715CP	283MSWW3	28	0.3	1.86	1.60	1.35	1.19
40336CP	28MSWW3	28	0.6	1.79	1.55	1.29	1.17
117057CP	32MSWW3	32	0.6	2.19	1.79	1.55	1.35
94502CP	40MSWW3	40	0.6	2.66	2.28	1.90	1.71
200723CP	48MSWW3	48	0.6	2.99	2.69	2.42	2.18
200731CP	64MSWW3	64	0.9	3.99	3.59	3.23	2.91

Machine Contact Dual-In-Line Female Sockets

- 0.100" centers
- Solder tail contact: .114" L
- Pin sleeve: tin
- Contact clip: gold

184612CP
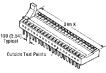
Part No.	Mfr. Cross Ref. No.	Pins	1	10	100
212855CP	SA101000	10	$.29	$.23	$.21
212863CP	SA121000	12	.30	.28	.25
212871CP	SA141000	14	.35	.33	.30
212880CP	SA161000	16	.40	.37	.34
212898CP	SA181000	18	.45	.42	.38
184612CP	SA201000	20	.50	.46	.42
212901CP	SA221000	22	.55	.51	.47
212919CP	SA241000	24	.60	.56	.51
212927CP	SA321000	32	.80	.74	.68
212935CP	SA481000	48	1.20	1.11	1.01

ARIES Electronics (Europe) Low Profile ZIF Sockets

Provides a low cost solution for ZIF test socket requirements. It has a height of only .319" (8.10mm), and even with the handle in open position it measures just .554"(14.07mm).

Dim X
.100 (2.54) Typical
Outside Test Points

102752CP

Part No.	Aries No.	Pins	Dim X	1	10	100
102744CP	28-526	28	1.64"	$5.49	$4.99	$4.49
102752CP	40-526	40	2.24"	6.95	6.39	5.75

ARIES Electronics (Europe) Universal ZIF Sockets

- Solder directly to PCB or plug directly into IC socket
- Screw mounting holes
- Accepts .300" to .600" IC centers x .1" spacing

103991CP

Part No.	Aries No.	Pins	1	10	100
103991CP	24-6554-10	24	$7.49	$6.79	$5.99
104002CP	28-6554-10	28	8.45	7.39	7.15
104011CP	32-6554-10	32	9.95	8.49	8.29
104029CP	40-6554-10	40	11.25	9.80	9.45

.100" and 2mm Shorting Blocks
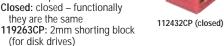
- Mates to .025" square posts on .100" centers
- Shorting socket jumper to address or code strip line plugs
- Mate with male headers, pg 123
- Pin material: phosphor bronze

Open: open on top to allow for a test point while

Closed: closed – functionally they are the same

119263CP: 2mm shorting block (for disk drives)

- Prepackaged: order in increments of 10, 100 or 1000

22023CP (open)

112432CP (closed)

Part No.	Description	10	100	1000
22023CP	Top open, black	$.12	$.09	$.06
119263CP	Top open, black (2mm)	.19	.16	.13
112424CP	Top open, blue	.12	.09	.06
112416CP	Top open, red	.12	.09	.06
19140CP	Top closed, black	.12	.09	.06
112441CP	Top closed, blue	.12	.09	.06
112432CP	Top closed, red	.16	.13	.09

.100" Male Headers (Gold)

- Snap apart to fit your application
- Solder to PC boards for instant plug-in access via shorting blocks, pg 123
- Contact material: phosphor bronze
- Current rating: 1 amp
- Contact area: gold
- Temp. range: -55°C to +120°C
- .025" square posts on a .100" x .100" matrix
- Use with crimp connector housing, pg 128

✳Prepackaged: order in increments of 10, 100 or 1000

109567CP **53575CP** **103376CP** **153728CP**

.100" Straight Male Headers Single Row

109575CP

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
108337CP	SMH02	2	✳	$.164	$.14	$.13
109575CP	SMH03	3	✳	.14	.12	.11
117559CP	SMH04	4	✳	.14	.12	.11
153699CP	SMH06	6	✳	.14	.12	.11
153701CP	SMH08	8	✳	.20	.17	.15
103392CP	SMH10	10	✳	.17	.13	.09
103376CP	SMH17	17	✳	.16	.14	.13
103368CP	SMH20	20	✳	.25	.23	.21
202825CP	SMH22	22	✳	.25	.19	.13
103350CP	SMH25	25	✳	.25	.19	.13
103341CP	SMH30	30		.35	.31	.28	.25
68339CP	SMH36	36		.42	.38	.34	.29
160881CP	SMH40	40		.49	.44	.40	.36

.100" Straight Male Headers Double Row

67820CP

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
115027CP	923804DS	4	✳	$.10	$.09	$.07
115035CP	923806DS	6	✳	.18	.16	.14
109516CP	923808DS	8	✳	.18	.16	.14
67820CP	923810DS	10	✳	.18	.16	.14
203810CP	923812DS	12	.56	.51	.46	.41
118455CP	923814DS	14	.35	.31	.27	.24
109567CP	923816DS	16	.42	.38	.34	.30
203828CP	923818DS	18	.59	.53	.48	.43
53479CP	923862DS	20	.47	.42	.38	.34
203836CP	923822DS	22	.59	.53	.48	.43
203844CP	923824DS	24	.59	.53	.48	.43
53495CP	923863DS	26	.52	.42	.31	.22
203852CP	923828DS	28	.65	.58	.53	.47
203879CP	923830DS	30	.65	.58	.53	.47
203861CP	923832DS	32	.65	.58	.53	.47
53516CP	923864DS	34	.53	.48	.43	.36
203887CP	923836DS	36	.65	.58	.53	.47
203895CP	923838DS	38	.65	.58	.53	.47
53532CP	923865DS	40	.52	.42	.31	.22
53559CP	923866DS	50	.49	.44	.40	.35
68574CP	923860DS	60	.59	.53	.48	.43
103405CP	923872DS	72	.70	.63	.57	.51
117196CP	923880DS	80	.83	.75	.67	.60

.100" Shorting Block w/ Handle

- Mates w/ .100" male headers, pg 123

Ratings:
- Current: 3A
- Accessible test point in handle
- Contact resistance: 20mΩ max.

Material:
- Plastic: PBT, glass filled
- Contact: phosphor bronze
- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	10	100	1000
152670CP	.100" shorting block	$.19	$.15	$.12

.100" Right Angle Male Headers Single Row

182991CP **153728CP**

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
153728CP	RMH08	8	$.39	$.31	$.23	$.16
182991CP	RMH08LP*	8	.35	.31	.25	.19
103270CP	RMH36	36	.75	.64	.58	.41

*Low profile

.100" Right Angle Male Headers Double Row

53575CP

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
203908CP	923804DR	4	$.49	$.44	$.40	$.36
203916CP	923806DR	6	.55	.49	.33	.26
203924CP	923808DR	8	.49	.39	.29	.21
203932CP	923810DR	10	.59	.47	.35	.25
203941CP	923812DR	12	.59	.47	.35	.25
203959CP	923814DR	14	.65	.52	.39	.27
203967CP	923816DR	16	.65	.52	.39	.27
203975CP	923818DR	18	.65	.52	.39	.27
53575CP	923820DR	20	.59	.53	.48	.43
203983CP	923822DR	22	.65	.52	.39	.27
203991CP	923824DR	24	.65	.52	.39	.27
53583CP	923826DR	26	.65	.52	.39	.27
204003CP	923828DR	28	.69	.55	.41	.29
204011CP	923830DR	30	.75	.60	.45	.32
204020CP	923832DR	32	.75	.60	.45	.32
204038CP	923834DR	34	.75	.60	.45	.32
204046CP	923836DR	36	.75	.60	.45	.32
204054CP	923838DR	38	.75	.60	.45	.32
53604CP	923840DR	40	.75	.65	.44	.32
53612CP	923850DR	50	.75	.65	.44	.32
103413CP	923872DR	72	.99	.83	.71	.54
139563CP	923880DR	80	1.15	.99	.89	.59
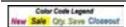
Opening an account is easy!!

Corporate Customers

Call 1-800-831-4242 for details today.

For Tools see pages 148 - 153.

European Terminal Blocks

- Number of poles: 12
- 1.2mm raised base
- Working temperature: 230˚F (110˚C)
- Material: Polyamide 66 (nylon 66), UL94V2, natural
- Terminal insert: brass metal alloy, nickel plated
- Wire protector: stainless steel spring
- Screws: zinc plated, yellow chromed
- Voltage: 600V

215010CP

Part No.	Prod. No.	Amps	AWG	1	10	100
215010CP	PA8H	20A	12-22 ..	$1.79	$1.59	$1.29
215028CP	PA10H	30A	10-22	1.89	1.69	1.39
215036CP	PA12H	35A	10-22	2.59	2.29	1.99

KULKA® 601 GP Series Double Row Terminal Blocks

188699CP   **188672CP**

- Base: general purpose phenolic; 150˚C
- Screws: #6-32, binder head, phillips-slot
- Terminals: brass plated • Width (W): 1.12"
- .437" (11 mm) centers • Height (H): .50"
- 1100Vrms; 20A ratings; for 14-16 AWG wires
- Open block design
- UL/CSA/CE approved

Part Number	Product Number	Poles	Dimensions A"	B"	1	10	50
188699CP	601GP4	4	2.19	2.50	$1.69	$1.49	$1.35
188681CP	601GP6	6	3.06	3.38	2.39	2.19	1.89
188672CP	601GP8	8	3.94	4.25	2.95	2.75	2.49
188664CP	601GP10	10	4.81	5.13	3.49	3.25	2.95
188701CP	601GP12	12	5.69	6.00	5.49	4.95	3.95

Double Row Terminal Blocks

- Wire gauge range: 12-18 AWG
- Body Material: black thermoplastic (UL94V-0)
- Terminals: brass tin plated
- Screws: steel nickel plated
- Insulation withstanding voltage: 2000VAC min.
- Insulation resistance: 1000MΩ or more at 500VDC

10A @ 600V

- Screw size: M3.0
- Width (W): 19.5mm
- Height (H): 11.9mm

208872CP
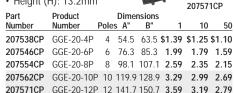
Part Number	Product Number	Poles	Dimensions A"	B"	1	10	50
208856CP	GGE-10-4P	4	47.5	55	$.99	$.89	$.79
208864CP	GGE-10-6P	6	64.5	74	1.39	1.25	1.15
208872CP	GGE-10-8P	8	95	102.5	1.69	1.59	1.49
208899CP	GGE-10-10P	10	104.5	112	2.39	2.15	1.89
208881CP	GGE-10-12P	12	123.5	131	2.79	2.49	2.25

20A @ 600V

- Screw size: M3.5
- Width (W): 22.0mm
- Height (H): 13.2mm

207571CP

Part Number	Product Number	Poles	Dimensions A"	B"	1	10	50
207538CP	GGE-20-4P	4	54.5	63.5	$1.39	$1.25	$1.10
207546CP	GGE-20-6P	6	76.3	85.3	1.99	1.79	1.59
207554CP	GGE-20-8P	8	98.1	107.1	2.59	2.35	2.15
207562CP	GGE-20-10P	10	119.9	128.9	3.29	2.99	2.69
207571CP	GGE-20-12P	12	141.7	150.7	3.59	3.19	2.79

DINKLE .197" (5mm) Terminal Blocks

- Materials: housing: polyimide; solder: tin plated brass
- Lead spacing: .197"
- Wire range: 12-24 AWG
- Contact rating: 300V @ 10A
- PC mount
- Insulation resistance: 500MΩ or more @ 500V
- Modular housing: end-to-end stackability
- Terminals interlocking with same series

DT Series

DT128 Type (Side Entry)
- Block width & height: .40" x .55"

Fig. 1   **99397CP**

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
99426CP	1	2	0.4".....	$.72	$.55	$.44	$.40
99397CP	1	3	0.6"........	.89	.79	.69	.59
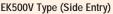
EK500 Series

160784CP   **161066CP**   Fig. 2   Fig. 3

EK500V Type (Side Entry)
- Block width & height: .40" x .55"

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
160784CP	2	2	0.4" ..	$.75	$.65	$.50	$.43
160792CP	2	3	0.6"	.85	.75	.65	.58

EK500A Type (45° Entry)
- Block width & height: .48" x .61"

Part No.	Fig.	Term.	Block Lgth	1	10	100	1000
161066CP	3	2	0.4" ...	$.75	$.65	$.49	$.39
161058CP	3	3	0.6"	.85	.75	.69	.55

OST .197" (5mm) Vertical Terminal Blocks

Side Entry

189675CP

- Rated voltage (UL): 250V
- Rated current: 15A
- Wire size: 22-14AWG
- PCB hole diameter: .050"
- Spacing: .197"
- Terminal block: copper zinc

Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
189675CP	2	.42 x .30 x .37	$.79	$.71	$.64	$.58
189667CP	3	.61 x .30 x .37 ..	.89	.80	.72	.61

OST .197" (5mm) Terminal Blocks

- Screw size: M2.6
- Rated current: 10A; 300VAC
- Insulation resistance: >500MΩ @ 500VDC
- PCB hole diameter: 1.8mm
- Wire range: 14-24 AWG
- Materials: cage clamp/ terminal/ pin header – tin plated brass
- Use with P/N 164814CP, pg 125

164793CP   **164806CP**

Male Dovetails
Female Dovetails
5mm
13.55mm
10mm
Top View   **164793CP**

Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
164793CP	2	.40 x .54 x .43	$.59	$.53	$.47	$.42
164806CP	3	.60 x .54 x .43 ..	.84	.76	.62	.54
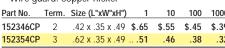
OST .200" (5.08mm) Vertical Terminal Blocks

Side Entry

- Rated voltage (UL): 250V
- Rated current: 15A
- Wire size: 14-22 AWG
- PCB hole diameter: .050"
- Spacing: .200"
- Insulating material: polyimide
- Terminal block: copper zinc
- Wire guard: copper nickel

152346CP

Part No.	Term.	Size (L"xW"xH")	1	10	100	1000
152346CP	2	.42 x .35 x .49	$.65	$.55	$.45	$.39
152354CP	3	.62 x .35 x .49 ..	.51	.46	.38	.32
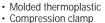
entrelec® DIN Rail-Mounted Terminal Blocks

Foot snaps onto standard DIN and DIN 2 rails. Terminals are positively retained on rails, but can be removed without disturbing adjacent units.
- Molded thermoplastic
- Compression clamp
- Spacing 6mm (0.238") • 22-12 AWG wire

185914CP
185965CP
Sold in 1 meter (39") length

Part No.	Product No.	Type	1	10	100
185914CP	011511607	M4/6 ...	$1.25	$1.09	$.99
185965CP	017322005	PR30	7.19	6.49	5.85

entrelec® Fuse-Holder Terminal Block

- Standard block
- 13mm block
- For use with ¼" x 1" and ¼" x 1¼" fuses, pg 88

Part No.	Product No.	Type	1	10	100
186010CP	019909513	ML10/13SF	$6.95	$6.25	$5.49

.156" (3.9mm) Center Housing Connectors

- Mating connectors for Mean Well LPS and LPP series power supplies (pgs 16-19)
- Current rating: 10A AC/DC
- Voltage rating: 250V AC/DC

Part No.	No. of Positions	1	10	100	1000
215950CP	5	$.35	$.32	$.28	$.26
215976CP	8	.39	.35	.32	.28
215968CP	12	.49	.44	.39	.35

See the yellow and green highlighted items.
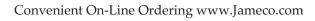
Jameco Special Values!

Details on page 4.

.156" (3.9mm) Center Straight-Friction Lock Headers

- Ideal for AC and DC power distribution
- Voltage rating: 250VAC/VDC max.
- Current rating: 7 amps AC/DC
- Contact resistance: 20mΩ
- Temperature range: -25°C to +85°C
- Header material: pin - brass/tin-plated
- Base: nylon 66, UL94V-2

104811CP

✱ Prepackaged: order in increments of 10, 100, 1000

Part No.	Cross Ref. No.	Pins	1	10	100	1000
104791CP	LMH4	4 ...... ✱	$.11	$.09	$.07	
104803CP	LMH5	5 ...... ✱	.14	.11	.09	
104811CP	LMH6	6 ...... ✱	.15	.12	.10	
104838CP	LMH8	8 .... .12	.11	.099	.09	
104846CP	LMH10	10 ... .29	.25	.19	.15	

.156" (3.9mm) Center Housing Connectors

- Common to many power supplies carried by Jameco. Some power supplies (pgs 7-0) may require multiple connectors
- Housing material: nylon 66, UL94V-2
- Use with crimp pins, 78318CP, below

104731CP

✱ Prepackaged: order in increments of 10, 100, 1000

Part No.	Cross Ref. No.	Pins	1	10	100	1000
176743CP	LCH2	2 ...... ✱	$.07	$.045	$.04	
104432CP	LCH3	3 ...... ✱	.19	.12	.11	
104715CP	LCH4	4 ...... ✱	.22	.15	.12	
104723CP	LCH5	5 ... .26	.24	.17	.13	
104731CP	LCH6	6 ... .33	.30	.24	.15	
104766CP	LCH10	10 .. .39	.32	.28	.23	

.156" (3.9mm) Center Crimp Pin

- Use with .156 housings (above)
- Use 159265CP crimping tool, pg 151
- Material: brass/tin plated
- Pin wire gauge: 22-26 AWG

Prepackaged: order in increments of 10, 100, 1000

Part No.	Mfr. Cross Ref. No.	10	100	1000
78318CP	AMP501T	$.11	$.08	$.07

.156" Female Crimp Pins **SALE**

- Pin wire gauge: 18-22 AWG
- Material: tin-plated brass
- Use 99442CP crimping tool, pg 151

Prepackaged: order in increments of 10, 100 or 1000

Part No.	Mfr. Cross Ref. No.	10	100	1000
154093CP	LRPIN	$.07	$.05	$.035

.197" (5mm) Male Header

- Snap apart to fit your application
- Spacing: .197"
- Contact pin: tin plated brass
- 0.05" round posts
- Use with 164793CP & 164806CP, pg 124
- 24-pin

Part No.	Mfr. Cross Ref. No.	1	10	100
164814CP	TBH24	$2.25	$1.95	$1.75

Extraction Tools for Crimp Pins

- Quickly and easily extract 0.093" locking pins from interlocking connectors
- Length: 5"
- See far right for crimp pins, 42729CP & 42649CP

131887CP

Part No.	Product No.	Description	1	10
131887CP	HT319C	Male tool for 42729CP	$9.95	$8.95
131879CP	HT319B	Fem. tool for 42649CP	9.95	8.95

molex .062" Power Connector Kit
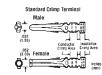
This assortment kit contains mating sets of housings and pins.

- Voltage: 250VAC • Current: 5A
- Temperature range: -40°C to +105°C

SALE

Includes: 3 ea. 2-pin plugs and 2-pin receptacles, 8 ea. male terminals, and female terminals.

Standard Crimp Terminal
Male
Female

Part No.	Molex No.	Description	1	10	50
142113CP	1625-2	Kit	$5.69	$5.15	$4.59

molex .093" Power Connector Kits

These assortment kits contain mating sets of housings and pins.
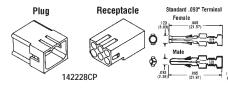
- Voltage: 250VAC
- Temperature range: -40°C to +105°C

142181CP: • 3 ea. 2-pin plugs & receptacles, 8 ea. female & male terminals • Current: 12A
142201CP: • 2 ea. 4-pin plugs & receptacles, 10 ea. female & male terminals • Current: 9A
142228CP: • 2 ea. 6-pin plugs & receptacles, 14 ea. female & male terminals • Current: 9A

Includes: Male and female tin-plated standard brass .010" pins; 18-22 AWG crimp size wire

Plug **Receptacle**

Standard .093" Terminal
Female
Male

142228CP

Part No.	Molex No.	Description	1	10	50
142181CP	1545	Kit	$4.95	$4.49	$3.95
142201CP	1490	Kit	4.95	4.49	3.95
142228CP	1261	Kit	5.25	4.75	3.95
142236CP	W-HT-2038	Ext. tool	16.45	14.85	13.35

0.2"-Pitch Power Connectors and Pins

Connector & Housing Specifications:
- Voltage rating: 250VAC (Mate-N-Lock 600VAC)
- Operating temperature: -55°C to +105°C

Crimp Pin Specifications:
- Material: tin plated brass • Current rating: 1.5 amps
- Wire size range: 18-24 AWG
- Use crimp tool P/N 99442CP, pg 151

For 5.25" Disk Drives and Power Supplies

42075CP & 42067CP Connector Housings:
- Keyed mating connectors
- External key bar indicates pin 1

42729CP (Male for 42075CP)
109145CP
117567CP
42649CP (Female for 42067CP)
42075CP (Male)
42067CP (Female)
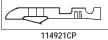
- See far left for extraction tools, 131887CP & 131879CP
- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	10	100	1000
109145CP	4-pin M vert. PCB mtg	$.59	$.49	$.31
117567CP	4-pin M PCB mounting, horizontal edge mount	.63	.55	.49
42075CP	4-pin M housing	.12	.11	.10
42067CP	4-pin F housing	.23	.18	.15
42729CP	M crimp pin for 42075CP	.10	.07	.06
42649CP	F crimp pin for 42067CP	.10	.07	.06

For 3.5" Disk Drives and Power Supplies

114930CP **114999CP** **114921CP**

- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	10	100	1000
114930CP	4-pin F housing	$.19	$.17	$.15
114921CP	F crimp pin for 114930CP	.11	.095	.08

Part No.	Description	1	100	1000
114999CP	4-pin M rt. angle PCB mtg ..	$.35	$.31	$.28
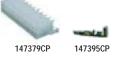
0.118"-Pitch ATX Power Connectors for Motherboards & Power Supplies
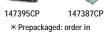
- Voltage rating: 250V AC/DC • Current rating: 7A AC/DC • Temperature range: -25°C to 85°C
- Insulation resistance: 1000MΩ min.
- Withstanding voltage: 1500V/min.

147379CP: ATX male 20-pin edge mount connector
- Material: nylon 66, UL-94VO
- Material of post: tin-plated brass • Diameter of post: .045"

147387CP: Housing connector • Material: nylon 66, UL-94VO
147395CP: ATX power terminal pins • Material: tin-plated brass

147379CP **147395CP** **147387CP**

✱ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	L	W	H	Dia	Use With	1	10	100	1000
147379CP	20-pin male connector	1.7"	0.4"	0.6"	—	—	$.59	$.53	$.48	$.43
147387CP	20-pin housing connector	1.7"	0.4"	0.8"	—	147395CP	✱	.12	.11	.10
147395CP	Power terminal pin, female	.59"	—	—	.068"	147387CP	✱	.12	.11	.10

0.098"-Pitch AT Power Connectors for Motherboards & Power Supplies

- Voltage rating: 250V AC/DC • Current rating: 7A AC/DC • Temperature range: -25°C to 85°C
- Insulation resistance: 1000MΩ minimum • Withstanding voltage: 1500V/min.

78300CP: AMP60G male 6-pin PCB mount connector
- Material of post: tin-plated brass • Diameter of post: .09"

78326CP: AMP50G female 6-pin housing connector • Material: nylon
78318CP: AMP501T terminal pin
- Material: tin-plated brass
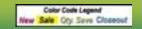
78326CP **78318CP** **78300CP**

✱ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	L	W	H	Dia	Use With	1	10	100	1000
78300CP	6-pin male connector	.93"	.37"	.57"	—	—	$.45	$.39	$.35	$.31
78326CP	6-pin housing connector	.94"	.25"	.74"	—	78300CP	.35	.31	.28	.25
78318CP	Power terminal pin, female	.69"	—	—	.09"	78326CP	✱	.11	.08	.07

Color Code Legend New | Sale | Qty. Save | Closeout

D-Subminiature Connectors

- Metal shells are tin-plated for improved EMI/RFI shielding
- Insulation resistance: minimum 1000MΩ at 500VDC
- Dielectric withstanding voltage: 1000V (one minute)
- Current rating: 1A to 5A
- High temperature thermoplastic
- Insulation material: PBT, UL rated 94V-0

Right Angle PC Mount Connectors

0.318" Set Back

Set Back (Short)

- Short style
- Lead length: .138"
- Lead spacing: .115"
- Shell: metal
- Current rating: 1A

15149CP

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	1	10	100	500
104942CP	DB9P318	9	M	$.55	.45	.35	.29
104951CP	DB9S318	9	F	.49	.44	.40	.36
71124CP	DA15P318	15	M	.69	.59	.55	.49
77956CP	DA15S318	15	F	.69	.59	.55	.45
168743CP	HDDB15P318*	15	M	.49	.42	.34	.31
71466CP	HDDB15S318*	15	F	.59	.47	.35	.25
15149CP	DB25P318	25	M	.79	.65	.55	.42
15181CP	DB25S318	25	F	.79	.70	.62	.43
71706CP	DC37P318	37	M	.99	.85	.72	.59
78182CP	DC37S318	37	F	.99	.79	.59	.39

*High Density

0.590" Set Back

Set Back (Long)

- Lead length: .178"
- Lead spacing: .104"
- Current rating: 1A
- Shell: Metal; except P/N 15763CP plastic
- Long style

104977CP

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	1	10	100
15763CP	DB9P590PL	9	M	$.29	$.25	$.19
104969CP	DB9P590	9	M	.99	.83	.72
104977CP	DB9S590	9	F	.99	.89	.80
104993CP	DA15S590	15	F	.99	.85	.59
189624CP	DB25P590†	25	M	.85	.76	.69
105005CP	DB25P590	25	M	.99	.89	.79
105013CP	DB25S590	25	F	1.35	1.19	.99

† Without board tabs

IDC Ribbon Cable Connectors

- Current rating: 1 amp
- Insulation material: glass-filled polyester
- Temp range: -55°C to +120°C
- Contact material: phosphor bronze
- Terminates with standard D-type connectors
- Shell: MD: Metal; CD: Plastic (see mfr. cross ref. no.)

12431CP

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	1	10	100
109225CP	MDB9P†	9	M	$1.35	$1.25	$1.09
12503CP	CDB9P	9	M	2.49	1.79	1.59
109217CP	MDB9S†	9	F	1.49	1.19	1.05
12520CP	CDB9S	9	F	2.49	2.29	1.75
117381CP	MDA15P	15	M	1.55	1.25	.69
12298CP	CDA15P	15	M	1.55	1.25	.75
116011CP	MDA15S	15	F	1.55	1.25	.85
12319CP	CDA15S	15	F	1.69	1.35	.79
115983CP	MDB25P	25	M	1.85	1.69	1.45
12335CP	CDB25P	25	M	1.89	1.69	1.29
115975CP	MDB25S	25	F	1.75	1.45	1.15
12431CP	CDB25S	25	F	1.95	1.79	1.39
115991CP	MDC37P	37	M	2.39	2.15	1.55
12466CP	CDC37P	37	M	3.09	2.35	1.65
116003CP	MDC37S	37	F	2.39	2.19	1.69
12482CP	CDC37S	37	F	3.49	2.65	1.85

† Require flat cable w/ .0625" centers

Solder-Cup Connectors

15114CP Front | 15114CP Back
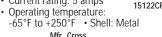
- Compatible with 24 AWG communications and 22 AWG solid cable, pg 117
- Shell: Metal

Part No.	Contacts	Gender	1	10	100	1000
15747CP	9	M	$.56	$.44	$.36	$.24
15771CP	9	F	.59	.49	.44	.31
15077CP	15HD*	M	.69	.59	.49	.31
164822CP	15HD*	F	.73	.59	.49	.31
15034CP	15	M	.55	.49	.42	.29
15051CP	15	F	.59	.49	.39	.24
15114CP	25	M	.99	.89	.79	.71
15157CP	25	F	.89	.80	.69	.61
203799CP	26HD*	M	.65	.58	.52	.52
203781CP	26HD*	F	.65	.58	.52	.52
15472CP	37	M	.99	.85	.79	.49
15499CP	37	F	1.19	1.05	.85	.49
15675CP	50	M	1.55	1.39	1.19	.99
15691CP	50	F	1.55	1.09	.89	.73

*High Density

Straight PC Mount Connectors

- Non-removable contacts
- 125 Vrms
- Current rating: 5 amps
- Operating temperature: -65°F to +250°F
- Shell: Metal

15122CP

15780CP

Part No.	Mfr. Cross Ref. No.	Cont.	Gender	1	10	100
111691CP	DB9PPCB	9	M	$.55	$.45	$.32
15780CP	DB9SPCB	9	F	.55	.45	.32
176760CP	DA15PPCB	15	M	.49	.39	.27
176751CP	DA15SPCB	15	F	.49	.44	.39
15122CP	DB25PPCB	25	M	.65	.59	.42
15165CP	DB25SPCB	25	F	.74	.55	.31
180021CP	DC37SPCB	37	F	.85	.64	.45

Crimp-Type Connectors and Pins

- Connectors: metal shell; removable male/female crimp pins
- Male/female pins: gold plated contact; tinned crimp tail
- Insertion/extraction tool: exchangeable tips
- Use 99442CP, pg 151 to crimp 43377CP, 43369CP

180890CP | 38771CP | 43369CP

19094CP

*Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
73189CP	DB9 M housing	$.49	$.39	$.31	$.19
73197CP	DB9 F housing	.49	.39	.31	.19
73200CP	DA15 M housing	.59	.53	.48	.43
73218CP	DA15 F housing	.65	.59	.53	.47
180881CP	HDDB15 M housing*	1.09	.87	.65	.46
180890CP	HDDB15 F housing*	.89	.79	.72	.65
38789CP	DB25 M housing	.56	.44	.36	.21
38771CP	DB25 F housing	.55	.44	.31	.21
43377CP	M crimp pin	*	.085	.075	.075
43369CP	F crimp pin	*	.08	.07	.06
185421CP	M crimp pin (180881CP)	*	.055	.045	.04
185412CP	F crimp pin (180890CP)	*	.055	.041	.029
19094CP	Insertion/extraction tool for above pins (HT101)	3.49	2.99	2.59	2.59

*High Density

4-40 Mounting Screw Hardware for D-Subminiature Connectors

4-40 x .187" Jack Screws and Hex Nuts

108986CP | 102795CP | 125014CP

*Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
169931CP	.275"L jack screw ....*	$.15	$.13	$.11	
172603CP	.315"L jack screw ....*	.17	.15	.14	
102816CP	.435"L jack screw	.49	.46	.41	.37
108986CP	.515"L jack screw	.55	.50	.45	.40
175636CP	.187"L hex nut ....*	.15	.12	.085	
102795CP	.240"L hex nut ....*	.21	.15	.10	
196293CP	.252"L hex nut ....*	.21	.12	.08	
125014CP	4-40 x 1.65"L plastic beige thumbscrew	.39	.31	.23	.16

4-40 Screw Sets

102808CP | 16547CP

102808CP: 4-40 screw (.30"L) and retainer set
16547CP: 4-40 x .187" jack screw (.31"L thread), washer, lock washer, and nut set

- Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	10	100	1000
102808CP	Screw/retainer set	$.35	$.30	$.20
16547CP	Screw/nut set	.31	.25	.17

D-Subminiature Connector Hoods

15085CP Plastic | 25620CP Metallized

- Use with D-sub solder cup and housing style connectors (hardware included)

D Series: plastic hood with strain relief (gray)
MD Series: metal coated plastic hood w/ strain relief
MH Series: die-cast metal hood with strain relief

Part No.	Mfr. Cross Ref. No.	Connector	1	10	100	1000
15721CP	DB9H	9-pin	$.49	$.45	$.39	$.35
25620CP	MDB9H	9-pin	.59	.49	.39	.35
147740CP	DB9MH	9-pin	1.45	1.29	1.15	.99
15018CP	DA15H	15-pin	.49	.45	.40	.35
25566CP	MDA15H	15-pin	.56	.44	.36	.31
15085CP	DB25H	25-pin	.45	.39	.35	.32
25603CP	MDB25H	25-pin	.59	.49	.42	.35
15106CP	DB25MH	25-pin	1.39	1.19	1.09	.89
15456CP	DC37H	37-pin	.59	.55	.45	.39
25611CP	MDC37H	37-pin	.75	.69	.59	.53
15659CP	DD50H	50-pin	.99	.85	.75	.65

25-Pin Dual Plastic Hood

Designed for custom applications requiring two D-sub connectors. Applications include custom jumper boxes and interconnects.

Shown assembled

Part No.	Description	1	10	100	500
34091CP	25-pin, plastic dual ..	$.95	$.85	$.75	$.59

DIN and Mini DIN Plugs and Receptacles

177236CP   **15886CP**

- Solder barrels including strain relief
- See page 117 for cable

Part No.	Pins	Type	1	10	100
142279CP	4	Mini plug	$.89	$.79	$.59
142261CP	6	Mini plug	.99	.85	.69
177244CP	6	Mini receptacle	.99	.85	.69
111878CP	8	Mini plug	.99	.89	.74
177236CP	8	Mini receptacle	1.09	.82	.57
15878CP	5	DIN plug	.55	.41	.29
180873CP	5	DIN receptacle	.59	.49	.45
15886CP	6	DIN plug	.59	.50	.39
15894CP	8	DIN plug	.69	.59	.49

DIN Female Sockets

- Metal body
- Panel mount with solder lugs

15851CP

Part No.	Mfr. Cross Ref. No.	# of pins	1	10	100	500
15843CP	DINJ5	5	$1.09	$.98	$.88	$.79
15851CP	DINJ6	6	1.19	1.09	.99	.89
15860CP	DINJ8	8	1.29	1.09	.89	.79

Right Angle DIN Female Sockets

- Set back: 0.5" • PC mount contacts

140791CP/119474CP:
Plastic/metal body
29399CP: Plastic body

29399CP

Part No.	Mfr. Cross Ref. No.	# of pins	1	10	100	500
140791CP	MDR4S	4 (mini)	$.75	$.60	$.45	$.32
119474CP	MDR6S	6 (mini) ..	.75	.60	.45	.32
207722CP	MDS8100	8 (mini) ..	.99	.89	.79	.69
29399CP	RD5	5	.59	.53	.40	.36

USB-A & B Connectors and Pins

159716CP USB-A   **161023CP USB-A**   **174051CP USB-B**

159716CP/174060CP:
USB A & B Male Connectors
- 3-part housing: tin plate over brass and glass fiber
- 4-pins (P/N 159724CP) required per USB connector

174060CP USB-B

161023CP/174051CP:
USB A & B Female Connectors
- PC mount right angle with board locks

159724CP: Male Crimp Pin
- Pin for P/N 159716CP and 174060CP (4 required)
- Contact brass
- Use P/N 159265CP for crimping tool, pg 151

Use with Bulk USB Cable on page 171.

159724CP

✻ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
159716CP	USB-A conn. (M)......	$.79	$.71	$.61	$.44
161023CP	USB-A conn. (F)	.79	.71	.61	.55
174060CP	USB-B conn. (M)	.95	.85	.69	.55
174051CP	USB-B conn. (F)	.95	.85	.69	.55
159724CP	Crimp pin	✻	.125	.09	.065

Centronics Parallel Interface Connectors
Metal Body and Shell, Solder-Type Contacts

SALE

180072CP   **42382CP**

- Solder eyelets accept 24 AWG wire, pg 117
- Male cable plugs
- Complete with cable boot, shell and hardware

Part No.	Cross Ref. No.	Contacts	1	10	50
180072CP	57-30140	14	$1.15	$1.05	$.95
42382CP	57-30360	36	1.79	1.59	1.49

PCB Right Angle Centronics Connectors

72151CP   **72080CP**

- Solder-type contacts • Space between rows: .164"
- Space between pins: 0.1" • Metal body • PC mount

Part No.	Description	1	10	100
72151CP	36-contact female	$2.95	$2.25	$1.55
72080CP	50-contact female	4.95	4.45	3.99

IDC Centronics Connector

- Contact material: gold plated phosphor bronze; plastic casing
- Current rating: 1 amp
- Temp. rating: -55°C to +105°C
- Use 73251CP IDC crimping tool, pg 151

Part No.	Mfr. Cross Ref. No.	Description	1	10	100
13848CP	CEN36M	36-contact male	$1.75	$1.35	$.92

SCSI-III Half-Pitch IDC Connector

- Connectors are high-density D-sub

SALE

Part No.	Description	1	10	50
139061CP	68-pin male SCSI-III	$3.05	$2.75	$2.49

.100" IDC Plug Connectors
Double Row
- .100" x .100" grid
- Plastic
- Shrouded header w/o mounting ears
- Contact: gold-plated phosphor bronze
- Use with IDC socket for connectors, above right
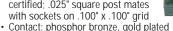
29217CP

Part No.	Cross Ref. No.	Contacts	1	10	100
29188CP	P40	40 ...	$1.95	$1.75	$1.49
29217CP	P50	50	1.95	1.75	1.49

.100" Low-Profile Straight Male Shrouded Headers

- Features: UL recognized, CSA certified; .025" square post mates with sockets on .100" x .100" grid
- Contact: phosphor bronze, gold plated
- Use with IDC socket connectors, above

68179CP

Part No.	Description	1	10	100	1000
67811CP	10-pin	$.39	$.35	$.32	$.28
68179CP	16-pin	.44	.40	.35	.32
68291CP	20-pin	.49	.47	.39	.23
68371CP	26-pin	.54	.42	.35	.21
68582CP	34-pin	.65	.52	.37	.25
181104CP	40-pin	.65	.52	.42	.28

.100" & 2mm IDC Socket Connectors
Double Row
- Mates with 2 rows of .025"Sq. or Dia. posts on patterns of .100" centers (male headers, see below) • Current rating: 1A
- Industry standard IDC socket (plastic)
- Temperature rating: -55°C to +105°C
- Use crimper P/N 73251CP, pg 151

32563CP

Polarized IDC Socket Connectors
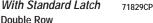
Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
32491CP	S10	10	$.29	$.25	$.19	$.15
153947CP	S14	14	.32	.27	.21	.16
119466CP	S16	16	.35	.29	.22	.17
32521CP	S20	20	.39	.32	.25	.18
32563CP	S26	26	.45	.35	.29	.19
32643CP	S34	34	.49	.39	.35	.25
32678CP	S40	40	.55	.45	.39	.29
100386CP	IDC440*	44 (2mm)	.99	.89	.75	.59
32707CP	S50	50	.65	.55	.45	.35
32758CP	S60	60	.75	.60	.45	.32

*2mm pin spacing

Non-Polarized IDC Socket Connectors

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
138376CP	SN10	10	$.35	$.32	$.28	$.24
138325CP	SN20	20	.45	.40	.36	.28
138333CP	SN26	26	.42	.38	.34	.28
138341CP	SN34	34	.45	.39	.35	.29
138350CP	SN40	40	.49	.45	.39	.29
138368CP	SN50	50	.65	.55	.45	.35

.100" (2.5mm) Straight Male Headers
With Standard Latch   **71829CP**
Double Row
- 0.1" contact center
- Mount vertical
- Keying slot
- Use with IDC socket connectors, above

Part No.	Description	1	10	100	500
117663CP	10-pin	$1.09	$.87	$.65	$.46
71829CP	20-pin	1.09	.98	.86	.74
71933CP	26-pin	1.19	.95	.79	.69
72215CP	50-pin	1.39	1.19	.99	.85

.100" (2.5mm) Female Header Receptacles

- Gold plated contacts • 0.1" contact center

Vertical Mount (Top Entry)

Part No.	Contacts	Type	1	10	100	500
70754CP	8	Single row	$.49	$.40	$.27	$.23
200782CP	12	Single row	.69	.62	.56	.50
70720CP	16	Double row	.79	.71	.64	.58
70826CP	20	Double row	.99	.87	.76	.61
105056CP	30	Double row	.99	.87	.76	.61
163862CP	34	Double row	.99	.87	.76	.61
111704CP	40	Double (Tin)	1.29	1.15	.99	.89

Right Angle Mount (Side Entry)

Part No.	Contacts	Type	1	10	100	500
71159CP	20	Double row	$1.25	$1.10	$.99	$.85
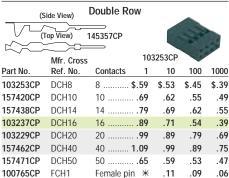
.100" Non-Polarized Connector Housings and Crimp Pins

- Mates with .025" square post on pattern of .100" centers (male headers, see pg 123)
- Current rating: 1A • Pin material: brass/tin plated
- Pin wire gauge: 26-22 AWG • Plastic
- Temperature rating: -55°C to +105°C
- Use 159265CP pin crimper, pg 151 and 100765CP below

✳ Prepackaged: order in increments of 10, 100 or 1000

Single Row

103190CP

100765CP

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
100811CP	SCH2	2 .... ✳	$.27	$.22	$.18
157382CP	SCH3	3 .... ✳	.31	.24	.19
100802CP	SCH4	4 .... ✳	.29	.25	.19
163686CP	SCH5	5 .... ✳	.26	.25	.19
103211CP	SCH6	6 .... ✳	.31	.27	.21
103202CP	SCH8	8 .... ✳	.35	.29	.25
103190CP	SCH10	10 .... .42	.39	.36	.31
103181CP	SCH20	20 .... ✳	.45	.39	.35
103157CP	SCH36	36 .... .49	.45	.39	.35
100765CP	FCH1	Female pin ✳	.11	.09	.06
145357CP	MCH1	Male pin .... ✳	.14	.13	.12

Double Row

(Side View)
(Top View)
145357CP

103253CP

Part No.	Mfr. Cross Ref. No.	Contacts	1	10	100	1000
103253CP	DCH8	8 .... $.59	$.53	$.45	$.39
157420CP	DCH10	10 .... .69	.62	.55	.49
157438CP	DCH14	14 .... .79	.69	.62	.55
103237CP	DCH16	16 .... .89	.71	.54	.39
103229CP	DCH20	20 .... .99	.89	.79	.69
157462CP	DCH40	40 .... 1.09	.99	.89	.75
157471CP	DCH50	50 .... .65	.59	.53	.47
100765CP	FCH1	Female pin ✳	.11	.09	.06
145357CP	MCH1	Male pin .... ✳	.14	.13	.12

Card-Edge Connectors

- Fits all PC boards
- .054" to .070" thick

40694CP

Solder Eyelet .140" Spacing Between Rows

- Contact centers: .156
- With mounting ears

Part No.	Position	Contacts	1	10	100
39116CP	22/44	Gold $2.95	$2.25	$1.55

Solder Tail .200" Spacing Between Rows

- Contact centers: .100
- Without mounting ears

Part No.	Position	Contacts	1	10	100
40694CP	31/62	Tin (PC/AT) .... $.99	$.89	$.69
42091CP	49/98	Tin (AT) 1.09	.82	.57

We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

It's that simple!

.100" Low Profile Keyed Shrouded Headers and Connector
CD-ROM 4-Pin Headers and Connector

152741CP

152725CP

152733CP

SALE

- Voltage rating: 250V AC/DC
- Current rating: 3A AC/DC
- Insulation resistance: 1000MΩ min.
- Connector material: PBT, 30% glass
- Header material: PBT + 30% glass
- Withstanding voltage: 1000V AC/minute
- Pin material: tin-plated brass
- Recommended crimp tool P/N 99442CP, pg 151

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
152741CP	Straight header	$.45	$.39	$.35	$.29
152725CP	Right angle header ..	.55	.49	.42	.35
152733CP	Single w/ latch†	.45	.39	.23	.17
181673CP	Female pins .... ✳	.11	.08	.06

† P/N 152733CP requires 4 pins (P/N 181673CP)

.100" DIP Header Plugs

- Gold-plated leads
- Header plugs: keyed corner to indicate pin 1
- U-shaped pin termination for easy component attachment
- Lead length: .188"
- 0.1" spacing between leads

37129CP

Part No.	Mfr. Cross Ref. No.	Width	Pins	1	10	100
104336CP	8HP	0.3"	8 ...... $.79	$.67	$.57
134922CP	14THP*	0.3"	14 .... .99	.85	.69
37129CP	14HP	0.3"	14 ..... 1.19	.99	.89
37330CP	16HP	0.3"	16 ..... 1.35	1.25	1.09
38578CP	20HP	0.3"	20 ..... 1.49	1.35	1.19

* 134922CP is tin-plated

.100" IDC DIP Flat Cable Plugs

- Mates with standard 14, 16, 20, 24, 26, 28 & 40-pin DIP sockets with 0.1" spacing
- Plastic with Gold-Plated contacts
- Uses 28 AWG flat ribbon cable, pg 117
- Current rating: 1 amp

42673CP

Part No.	Mfr. Cross Ref. No.	Width	Contacts	1	10	100	500
42657CP	609-14	0.3"	14	$.45	$.33	$.29	$.22
42673CP	609-16	0.3"	16 .... .45	.35	.29	.25
104096CP	609-20	0.3"	20 .... .59	.53	.48	.41
42690CP	609-24	0.6"	24 .... .69	.62	.56	.49
99670CP	609-28	0.6"	28 .... .89	.80	.72	.59
42711CP	609-40	0.6"	40 .... .99	.89	.80	.72

For Fiber Optic Kits, see page 198.

Fiber Optic Infrared Detectors

- Mates with standard 1000µm core jacketed plastic fiber cable
- Connector-less fiber termination and connection

169990CP

169981CP

- Inexpensive plastic connector housing
- Compatible with LED emitters, below
- Interference-free transmission from light-tight housing
- Internal micro-lens for efficient coupling

169990CP: TTL compatible output infrared detector D95T
169981CP: TTL open-collector output infrared detector D96
169973CP: NPN Phototransistor D92
- V_{CEO}: 30V, Ic: 50mA

Part No.	Color Dot	Peak Wavelgth.	Sensitivity 1	10
169990CP	Yellow	800nm	.... $5.95	$5.35
169981CP	White	850nm	.... 6.95	6.25
169973CP	White	870nm	.... 2.69	2.39

Infrared and Visible Light Fiber Optic LED Emitters

- Mates with standard 1000µm core jacketed plastic fiber cable (recommend P/N 171272CP, below)
- Internal micro-lens for efficient coupling
- Connector-less fiber termination and connection
- Interference-free transmission from light-tight housing
- Excellent linearity
- Compatible with fiber optic photo detectors, above

169965CP

169949CP

Peak Wavelength Sensisivity:
169957CP: 950nm, Vf=1.7V max @ 50mA
169965CP: 660nm, Vf=1.8V max @ 50mA
169949CP: 660nm, Vf=1.8V max @ 50mA

Part No.	Description	Color Dot	1	10
169957CP	Fiber optic LED E91A	Blue ...	$3.25	$2.95
169965CP	Fiber optic LED E96	Pink	5.35	4.89
169949CP	Fiber optic LED E97	Red	5.95	5.39

Fiber Optic Cable-Cutting Tool Kit

Contains fiber optic stripper, 25W hot knife professional fiber cutter, water dispenser, rubber pad, 600 grit and 3µm polishing film, replacement blades, ST-connector fiber polishing puck, rugged storage container and instructions.

Part No.	Description	Weight	1	10
170034CP	Fiber Optic Tool Kit	2.5 lbs.	$114.95	$104.95

10' Fiber Optic Cable

- 1000µm core jacketed plastic fiber optic cable (10')

Part No.	Description	1	10
171272CP	10' fiber optic cable	$6.95	$6.25

Buzzers and Sonic Transducers

Magnetic Transducers • Applied voltage: 1/2 duty, square wave

Part Number	Fig.	Operating Volt. (Vp-p/mA)	Voltage Range (Vp-p)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
138721CP	1	1.5/10	1 – 2	2048	80	.32"H x .46"Dia.	$1.29	$1.19	$.91	$.86
207917CP	2	1.5/30	1 – 2	2048	75	.22"H x .47"Dia.	.99	.84	.69	.59
207925CP	3	1.5/70	1 – 2	2048	80	.50"L x .50"W x .30"H	1.09	.89	.75	.69
207941CP	4	1.5/80	1 – 2	2731	80	.28"H x .38"Dia.	1.09	.89	.75	.69
207968CP	5	1.5/80	1 – 2	2731	80	.22"H x .35"Dia.	1.09	.89	.75	.69
207909CP	2	3.6/40	1 – 4	1980	70	.22"H x .47"Dia.	.99	.84	.69	.59
138739CP	1	5/40	3 – 8	2400	85	.35"H x .46"Dia.	1.39	1.25	.89	.84
106500CP	1	5/40	3 – 8	2400	85	.40"H x .48"Dia.	1.19	.99	.79	.74
207933CP	4	5/100	4 – 8	3100	85	.28"H x .38"Dia.	1.09	.89	.75	.69
207950CP	5	5/100	4 – 8	3100	85	.22"H x .35"Dia.	1.09	.89	.75	.69

Magnetic Buzzers

Part Number	Fig.	Operating Volt. (VDC/mA)	Voltage Range (VDC)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
207984CP	6	1.5/30	1.25 – 2	2300	75	.47"H x .38"Dia.	$2.49	$2.19	$1.99	$1.69
76064CP	6	5/30	4 – 7	2300	85	.35"H x .46"Dia.	2.99	2.69	2.45	2.19
207976CP	6	12/30	8 – 15	2300	85	.47"H x .38"Dia.	2.49	2.19	1.99	1.69

Piezo Buzzers

Part Number	Fig.	Operating Volt. (Vp-p/mA)	Voltage Range (Vp-p)	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
206295CP	6	12/6	3 – 20	2900	95	.63"H x .92"Dia.	$2.49	$2.25	$1.95	$1.75
196357CP	6	12/5.8	3 – 16	4000	86	.30"H x .54"Dia.	2.69	2.45	2.19	1.95
138712CP	6	12/7	3 – 16	4000	80	.30"H x .54"Dia.	2.19	1.75	1.35	.92
207896CP	7	12/120	6 – 15	2800	105	3.4"L x 2.2"W x 1.3"H	8.95	7.95	6.95	6.25
207888CP	7*	12/120	9 – 15	3100	105	3.4"L x 2.2"W x 1.3"H	8.95	7.95	6.95	6.25
207992CP	8	12/250	6 – 16	3500	105	2.3"L x 1.8"W x 1.6"H	7.95	6.95	6.25	5.59
32601CP	9	24/15	1 – 28	2900	95	1.4"H x 1.7"Dia.	4.95	4.45	3.95	3.59
123537CP	9*	24/20	4 – 28	2900	80	1.4"H x 1.7"Dia.	4.19	3.79	3.39	2.95
76021CP	10	24/20	1.5 – 28	3200	95	1.0"H x 1.1"Dia.	4.79	4.35	3.89	3.49

* P/N dual tone

Mechanical/ElectroMechanical Buzzers

Part Number	Fig.	Operating Volt.	Voltage Range	Frequency (Hz)	Sound (dB)	Dimensions	Pricing 1	10	100	1000
24871CP	11	9/30	6 – 12	400	75	1.3"L x 0.7"W x 0.6"H	$2.49	$1.99	$1.79	$1.79
105822CP	12	9/220	—	500	80	1.3"H x 2.0"Dia.	1.69	1.55	1.37	.91
140695CP	11	12/25	9 – 15	400	75	1.3"L x 0.7"W x 0.6"H	1.79	1.59	1.49	1.29

Fig.1 Fig.2 Fig.3
Fig.4 Fig.5 Fig.6
Fig.7 Fig.8 Fig.9
Fig.10 Fig.11 Fig.12

110VAC Piezo Buzzer

- Sound pressure level: 90dB
- Output tone: pulse   • 6" lead wires
- Operating range: 60-150VAC
- Current drain: 20mA
- Fits 1.125" diameter opening
- Size: 1.3"H x 1.7"Dia.

Includes: Mounting nut

Part No.	Product No.	1	10	100
184743CP	FM-110A-903AL	$3.19	$2.99	$2.69

Microphones and Microphone Cartridges

VHF High-Band Wireless Microphones
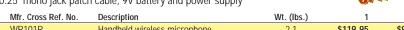
The perfect microphone for use with portable PA systems, video recording, and stage use. There is no cord to restrict your movements while providing clear crisp sound.

- T.H.D. (total harmonic distortion): less than 0.5% for crystal-clear sound
- Frequency stability: ±0.005% with Quartz controlled
- Maximum deviation range: ±15kHz with limiting compressor   • Transmission range: 300m
- Carrier frequency range: 100Hz to 15kHz   • S/N ratio: over 180dB @ 15kHz deviation

Includes: 0.25" mono jack patch cable, 9V battery and power supply

198248CP   198221CP

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	5
198248CP	WR101R	Handheld wireless microphone	2.1	$119.95	$99.99
198221CP	WR202H	Wireless microphone with clip-on headset	2.3	99.95	89.95

Audio Stereo Adapter

- Headphone stereo adapter
- 3.5mm female to 6.25mm male
- Length: 2.3"

SALE

Part No.	Description	1	10	100
196082CP	Audio adapter	$.59	$.39	$.25

Communications Speaker

- Frequency range: 200 - 18kHz
- Black ABS case   • Magnetic mount
- Maximum input: 8 watts
- Size: 3.0"W x 2.0"D x 2.8"H
- Weight: 0.5 lbs.   • Impedance: 8Ω

Includes: 3' cord with 3.5mm male plug

Part No.	Description	1	10
102031CP	Compact speaker	$7.95	$7.15

Omnidirectional Electret Condenser Microphone Cartridges

Applications:
- Tape recorders, intercoms, hearing aids, telephone and answering devices, sonic controlled toys and sensors
- Modems for computers
- Used for recording, testing, and monitoring

189958CP/136573CP   116505CP   160979CP   196488CP   140986CP

Part No.	Type	Sensitivity	Impedance	Frequency (Hz)	Max. Op. Volt. (VDC)	Stand Op. Volt. (VDC)	Current (Max.)	Sensitivity Reduction	S/N Ratio	Terminals	Size (H x Dia.)	Pricing 1	10	100	1000
116505CP	WM-54PC	-44 ±2dB	>2.2kΩ	20-16,000	10V	2.5V	0.6mA	-3dB @ 2V	>60dB	PC pin leads	.20" x .38"	$.75	$.67	$.55	$.49
160979CP	WM-64PKT	-44 ±3dB	>2.2kΩ	20-16,000	10V	2.0V	0.5mA	-3dB @ 1.5V	>58dB	PC pin leads	.10" x .24"	.79	.71	.64	.57
136573CP	WM-60PC	-54 ±2dB	>2.2kΩ	20-12,000	12V	4.5V	0.5mA	-3dB @ 3V	>40dB	PC pin leads	.30" x .38"	.53	.48	.43	.39
196488CP	JL-061C	-58 0dB	2kΩ	20-20,000	10V	2.0V	0.04mA	-3dB @ 1.5V	>55dB	Lead wires	.10" x .24"	1.25	.99	.89	.79
140986CP	CRM919	-64 ±3dB	1kΩ ±30%	20-10,000	12V	3.0V	0.8mA	-3dB @ 3V	>40dB	Solder pad	.90" x .39"	1.59	1.43	1.29	1.15

Color Code Legend
New Sale Qty. Save Closeout

Full-Range Replacement Speakers

These full-range speakers are perfect replacements for TVs, stereos, and computer systems.

• Full-range coaxial speakers provide extended frequency response and can handle higher-powered amplifiers
• Dual-cone speakers provide richer bass tones and crisper high tones
• Two-way speakers provide extended frequency response with both a tweeter and woofer
• Impedance: 8Ω

196402CP: shielded magnet prevents signal distortion of TVs, monitors, and CTRs.

SALE

Part No.	Mfr. Cross Ref. No.	Size	Type	Shape	Freq. Range	Magnet Wt. (oz.)	RMS Watts	Pricing 1	Pricing 10
197026CP	4030	4"	Full range	square	100-15kHz	2	5	$4.79	$4.35
196402CP	480P039-1	4"	Full range shielded	square	120-10kHz	6	10	6.49	4.89
197042CP	5030	5"	Full range	square	135-15kHz	3	5	4.79	4.35
197069CP	5412PX	5.25"	Full range coaxial	square	70-20kHz	10	30	10.89	9.79
197077CP	6030W	6"	Full range dual cone	round	70-15kHz	3	8	7.39	6.39
197085CP	8010HC	8"	Full range dual cone	round	60-16.5kHz	10	15	11.99	10.89

196402CP

197077CP

197085CP

197034CP

Round Ferrite Speakers

• Pre-tinned speaker lugs • Large magnet • Anodized metal surfaces • Braided copper voice coil leads • Paper diaphragm

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
135589CP	FE200	2.0 x 0.7	0.2	0.4	8	83	420 – 5000	1.3 x 0.4	$1.69	$1.45	$.99
10840CP	FE201	2.2 x 0.7	0.2	0.4	8	88	400 – 4500	1.3 x 0.4	1.65	1.25	.87
177130CP	57RF07	2.2 x 0.8	0.5	0.9	45	88	500 – 8000	1.6 x 0.5	.54	.49	.43
135714CP	FE202	2.6 x 0.8	0.3	0.5	8	88	340 – 4000	1.3 x 0.4	.65	.56	.50

135589CP side

135589CP back

Square Ferrite Speakers

• Pre-tinned speaker lugs • Large magnet • Anodized metal surfaces • Braided copper voice coil leads • Paper diaphragm

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
135693CP	FEB200	2.0 x 0.7	0.2	0.3	8	82	500 – 6000	1.3 x 0.5	$1.59	$1.45	$1.29
31958CP	FEB216	2.6 x 0.8	0.2	0.4	16	85	330 – 8000	1.3 x 0.5	2.25	1.99	1.79
99995CP	FEB204	2.6 x 0.9	3.0	4.0	4	95	300 – 14000	1.8 x 0.5	2.49	2.25	1.99
171168CP	FEB450SP	4.2 x 1.5	1.0	2.0	8	90	300 – 14000	1.8 x 0.6	1.79	1.55	1.39

99995CP side

99995CP back

Flat-Magnet, Square Piezo Speakers

• Excellent for alarms or other voice uses • Stainless steel diaphragm

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
34024CP	AZ30S	1.2 x 0.2	0.4	0.8	8	70	1300-8000	1.2 x 0.1	$1.69	$1.52	$1.35
76030CP	AZ40S	1.6 x 0.2	0.4	0.8	8	70	600-6000	1.6 x 0.1	1.95	1.75	1.49

34024CP side

34024CP back

Alnico Speakers

• For computer case use • Paper diaphragm • Wide frequency response
• Pre-tinned solder lugs • Large magnet • Impedance: 8Ω

SALE

Part Number	Mfr. Cross Ref. No.	Fig.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
88410CP	A0200	1	2.0 x 0.8	0.2	0.4	87	430 – 4500	0.5 x 0.4	$1.49	$1.29	$1.19
135765CP	A0201C	1	2.2 x 0.8	0.3	0.5	87	400 – 4000	0.5 x 0.4	1.59	1.19	.79
111587CP	B0102	2	1.7 x 0.6	0.1	0.3	83	500 – 5500	0.5 x 0.4	2.25	1.69	1.49
135811CP	A1527C02	3	1.6 x 2.8 x 1.2	2.0	5.0	82	450 – 20000	0.5 x 0.5	3.19	2.89	2.59

Fig. 1 **Fig. 2** **Fig. 3**

Samarium Cobalt Low Profile Speaker

• Round frame • Anodized metal surfaces • Ultra thin • Solder tabs • Paper diaphragm

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Magnet Size (Dia." x H")	Pricing 1	Pricing 10	Pricing 100
135626CP	MSC299	2.0 x 0.3	0.3	0.5	8	85	550 – 5000	0.5 x 0.6	$2.95	$2.65	$2.39

Side

Back

1.2" (30mm) PCB Mountable Speaker

• Round frame design • Ideal for PC board mounting • Mylar diaphragm • Solder leads

Part Number	Mfr. Cross Ref. No.	Dimensions (Dia." x D")	Input Nom (W)	Input Max (W)	Impedance (Ω)	Output SPL (dB)	Frequency Range (Hz)	Pin Spacing (mm)	Pricing 1	Pricing 10	Pricing 100
135722CP	PCM41S	1.2 x 0.5	0.150	0.200	8	82	700 – 5000	15.0	$2.25	$1.99	$1.85

Protective Coiled Grounding Wrist Strap

- Comfortable, adjustable Velcro wrist strap
- The coiled cord has banana plug and alligator clips
- Extended cord: 9' long
- Color: black

Includes: 1MΩ resistor for added safety

SALE

Part No.	Description	1	10	100
34551CP	Anti-static strap $6.49	$5.85	$5.29

3M Wrist Strap for Static Protection

- Rubberized wrist strap for comfort
- 1MΩ resistance for static dissipation
- Length: 5'
- Coiled cord with a banana plug and alligator clip
- Zipper-style mechanism adjustable to any size wrist

Part No.	Description	1	10	100
159257CP	Adjustable strap $7.95	$6.95	$6.25

Anti-Static Heel Strap

- Discharges static without restricting your mobility
- Ideal for anyone handling static sensitive devices
- Ground strap: 15.5"L

SALE

Part No.	Description	1	10	100
100327CP	Heel strap $7.25	$6.53	$5.95

Anti-Static Work Mats

Make your work environment safe from static discharge! These mats are made of attractive semi-conductive vinyl that provide adequate discharging, yet will not short leads or pins.
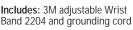
168508CP

Includes: Grounding clip

Part No.	Dimensions	Wt. (lbs.)	1	10	100
10575CP	11.3" x 22"	0.7 ..... $8.95	$7.95	$6.95
10583CP	19.5" x 23.5"	1.1 ..... 13.95	12.59	11.35
168508CP	24" x 28"	1.8 ..... 18.95	17.09	15.35

3M Anti-Static Field Service Kit

This kit provides all the basic items needed to create a static-safe work environment for field service work.

Includes: 3M adjustable Wrist Band 2204 and grounding cord

Part No.	Description	1	10
159994CP	8506 Field service kit $38.95	$34.95

Phone 1-800-831-4242

Fax 1-800-237-6948

Order Anytime 24x7x365

Online www.Jameco.com

Conductive Anti-Static Foam and Bags

Don't get zapped!

Protect your investment with these inexpensive bags and ensure a safe work area with our conductive anti-static foam.

13864CP

78668CP

- For safe storage of static sensitive devices

13864CP: 24.0"L x 12.0"W x 0.25"H

Part No.	Description	1	10	100
13864CP	Anti-static foam $7.95	$6.95	$5.95
78668CP	4" x 6" anti-static bags .... .19	.17	.16
78650CP	8" x 10" anti-static bags .. .69	.62	.55

Anti-Static Plastic DIP IC Storage Tubes and Rubber Rail Stops

29516CP: Thin tube (rail) fits 8, 14, 16, 18, 20 and 22-pin integrated circuits. Length: 23.75"
29524CP: Wide tube (rail) fits 24, 28, 32, 40 and 48-pin integrated circuits. Length: 20"
29583CP: Rubber stops used to plug plastic rail ends

ICs not included

29524CP   **29583CP**

✳ Prepackaged: order in increments of 10 or 100

Part No.	Mfr. Cross Ref.	Description	1	10	100
29516CP	RIC20	Thin rail ...... $.59	$.40	$.29
29524CP	RIC220	Wide rail .... .35	.20	.12
29583CP	RRS	Rubber stop .... ✳	.07	.06

Clamp Vise

- Lightweight, sturdy construction
- No tools needed – finger turn to tighten
- Ball cup allows vise to adjust to any angle
- Nylon jaws open 2"   • Size: 10.0"L x 2.5"W

Part No.	Description	Wt. (lbs.)	1	10
127167CP	Clamp vise	2.1 .... $19.95	$17.95

PANAVISE Vacuum Vise

- Features the patented "split ball" that tilts, turns and rotates through three planes
- Nylon jaws open a full 2.25"
- Powerful suction pad for quick and easy set-up
- Size: 5.0"L x 4.0"W x 6.3"H
- Weight: 3.3 lbs.   • One-year warranty

Part No.	Product No.	Description	1	10
27131CP	M381	Vacuum vise	$59.95	$53.95

PANAVISE Electronic Work Center

- Circuit board holder, standard base, tray base mount, solder station, sponges and wire holder included
- Size: 8.5"W x 7.8"H
- Weight: 5.3 lbs.
- One-year warranty

Part No.	Description	1	5	10
27060CP	Electronic center $74.95	$71.25	$66.95

PANAVISE PVJr. Vice

- Jaw opening: 2.8"
- Jaw size: 1" wide x 2" long
- Jaw heat tolerance: 350˚F
- Vertical/horizontal jaw grooves
- Fine/course adjusting knob
- The vise neck tilts, turns and rotates
- Vise height: 6.8"
- Base bolt is 4.3" and fits all PanaVise base mounts
- Weight: 1.4 lbs.
- One-year warranty

Part No.	Description	1	10
134439CP	Jr. vice w/ mountable base .. $19.95	$18.95

Third Hand
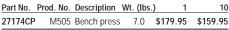
- Frees hands for soldering
- Two adjustable arms with alligator clip jaws
- 2" diameter magnifying lens
- Quick and easy rotation
- Sturdy, heavy base
- Weight: P/N 26690: 0.7 lbs.; P/N 72864: 1.4 lbs.

72864CP

Part No.	Description	1	10	50
26690CP	Third hand $5.95	$5.35	$4.79
72864CP	W/ soldering holder 7.95	7.19	6.49
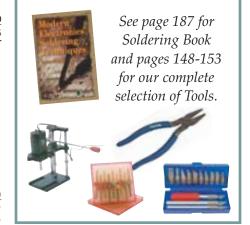
PANAVISE IDC Bench Press and Cable Cutter

Designed for low to medium volume mass termination of various IDC connectors on flat ribbon cable.

27182CP

27174CP

Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
27174CP	M505	Bench press	7.0	$179.95	$159.95

M505 Accessories
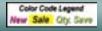
Part No.	Prod. No.	Description	Wt. (lbs.)	1	10
27182CP	M507	Cable cutter	0.9 .... $66.95	$61.95
27203CP	M510	Base plate	0.5 ...... 26.95	24.29
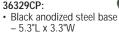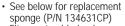
16 to 30-Watt Variable Soldering Iron, Stand & Sponge

116572CP:
• Length: 7.5"
36329CP:
• Black anodized steel base – 5.3"L x 3.3"W
• See below for replacement sponge (P/N 134631CP)
• Fits most soldering irons .85" diameter
Includes: Sponge

Part No.	Description	1	10	100
116572CP	Soldering iron	$18.95	$17.09	$15.35
36329CP	Soldering stand	4.25	3.85	3.45
134631CP	Sponge (for P/N 36329CP)	2.99	2.69	2.49

Weller® Light-Duty 23-Watt Soldering Iron & Kit

• Ideal for hobby or electronics kit work
• 1/8" removable tip
• Additional tips can be special ordered
• Length: 8"
• 120VAC @ 60Hz
191960CP: Includes lighted soldering iron, MT1 (cone shaped), MT2 (screwdriver), MT3 (chisel) 1/8" tips, lead free solder and soldering aid tool • Weight: 2.0 lbs.
189384CP/191978CP/191986CP: 2 pack
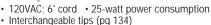
Part No.	Description	1	10	25
152872CP	Iron only (SP23L)	$14.95	$13.49	$11.95
191960CP	Iron kit (SP23LK)	16.99	15.99	14.89
189384CP	1/8" cone tip (MT1)	4.95	4.49	3.95
191978CP	1/8" scrdrvr tip (MT2)	4.95	4.49	3.95
191986CP	1/8"chisel tip (MT3)	4.95	3.75	2.65

Thermally Balanced 25-Watt Soldering Iron

The XY200GX is a thermally balanced soldering iron for the professional or hobbyist.

• 120VAC; 6' cord • 25-watt power consumption
• Interchangeable tips (pg 134)
• One-year warranty • UL listed • Length: 8.0"
Includes: 1.6mm conical tip

Part No.	Description	1	10	25
129040CP	25W solder. iron	$11.49	$10.35	$9.35

Weller® Professional 25-Watt & 35-Watt Soldering Irons

• Interchangeable heater elements
• Lightweight handle with cushioned grip
• Quick change knurled collar
• Length: 9"
• 120VAC @ 60Hz
Includes: Power cord & ST3 tip (pg 135)

Part No.	Product No.	Description	1	10
170587CP	WP25	25W solder iron	$29.99	$26.99
192102CP	WP35	35W solder iron	39.95	35.95
192153CP	PH25	Solder iron stand	15.95	14.55

30-Watt Soldering Iron and Stand

• UL approved
• Ideal for precision work
• 1/4" removable tip
• One-hand operation
• Length: 8.3"
• 110-120VAC

Part No.	Description	1	10	100
102461CP	30W soldering iron	$4.79	$4.35	$3.89
116020CP	Replacement tips (2)	2.25	1.79	1.25
36329CP	Soldering stand	4.25	3.85	3.45

35-Watt Soldering Iron

• UL approved
• Ideal for maintenance and hobby use
• 0.157" removable tip
• One-hand operation
• Length: 8.1"
• 110-120VAC

Part No.	Description	1	10	100
208987CP	35W soldering iron	$2.99	$2.69	$2.45
208995CP	Replacement tips (2)	.99	.89	.79
209074CP	Solder Roll, 8mm (.031")	5.49	4.89	4.39

Weller® 40-Watt Soldering Iron
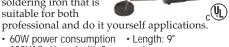
• Develops 900˚F / 482˚C of heat
• MT10 1/4" / 10mm diameter replaceable nickel plated copper tip
• Stainless steel barrel • Length: 8.25"
• 120VAC @ 50-60Hz • Weight: 0.27 lbs.
• Heat & impact resistant handle

Part No.	Prod. No.	Description	1	10
170561CP	SP40L	40W solder iron	$17.95	$15.95
188980CP	MT10	1/4" chisel tip 2 pk	6.49	5.85

Economical 60-Watt High-Performance Soldering Iron

A high-quality soldering iron that is suitable for both professional and do it yourself applications.
• 60W power consumption • Length: 9"
• 120VAC; 6' cord with 3-prong plug

Part No.	Product No.	1	10	25
195223CP	200PHG	$13.95	$12.49	$12.11

Weller® 100-Watt Soldering Iron

• Uses the Weller® "closed loop" method of controlling maximum tip temperature
• Portable line voltage iron – no base station required
• Temperature controlled by the tip
• Nominal heat-up time with 700˚F tip is 110 seconds • 120VAC @ 60Hz input
• Length: 6" • Weight: 0.7 lbs.
Includes: CT6F7 (0.375" screwdriver tip; 700˚F)

Part No.	Prod. No.	Description	1	10
192081CP	W100PG	Solder iron	$62.95	$56.95
192090CP	CT6F7	.375" scrwdrvr tip	9.95	8.49

30-Day Money-Back Guarantee
If you're not satisfied we'll take it back!
Details on page 201.

SMD Tweezer Iron

• Maximum efficiency ceramic heating elements insures rapid heat-up and instant heat recovery
• Max. temp.: 760˚F
• 120VAC
• Heater insulation exceeds 100MΩ
• Heater power consumption: 35W x 2
Includes: 0.095" tip

Part No.	Description	1	10	25
168410CP	Tweezer iron	$59.95	$53.95	$48.95
168583CP	Tip .078"	11.95	10.79	9.69
168591CP	Tip .590"	12.95	11.69	10.49

WAHL® Cordless Soldering Iron

The #1 choice for field service soldering!

IsoTip® Power Pro Model #7904
• 900˚F tip temperature
• Iron performance equivalent to 25-watt iron
• Solders 200+ joints or up to 30 minutes of continuous soldering
• LED indicator light
• Weight: 1.1 lbs.
• 120VAC @ 60Hz input
Includes: Soldering iron, recharging stand, Ni-Cad battery pack, and tips

Part No.	Description	1	10
132783CP	Power Pro cordless iron	$57.95	$54.95

Weller® Cordless Soldering Iron Kit

• Self igniting and instant heat
• Adjustable temperature (25W to 125W)
• Auto switch off
• Visible gas level
• Additional tips can be special ordered
• 2 hours of heat on average tank setting
Includes: soldering tool, hot blower tip, hot knife tip, 2.4mm and 4.8mm double flat tip, cleaning sponge, storage case and instruction manual
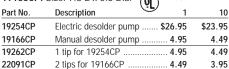
Part No.	Prod. No	Description	1	10
152207CP	PSI-100K	Tool kit	$64.95	$58.45

Electric & Manual Desolder Pumps
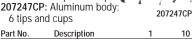
• Easily disassembled for cleaning
• One-hand operation
• Replacement tips available
19254CP: • UL listed
• Size: 10.5"L x1.0"Dia.
19166CP: Size: 7.8"L x 0.8"Dia.

Part No.	Description	1	10
19254CP	Electric desolder pump	$26.95	$23.95
19166CP	Manual desolder pump	4.95	4.49
19262CP	1 tip for 19254CP	4.95	4.49
22091CP	2 tips for 19166CP	4.49	3.95

Vacuum Pen Tools

• Picks up components with weight of 1.1 lbs. or less
• ESD safe body
207239CP: 4 tips and cups
207247CP: Aluminum body; 6 tips and cups

Part No.	Description	1	10	25
207239CP	Handivac tool	$18.69	$16.79	$15.15
207247CP	Pen Vac tool	37.95	34.25	30.49

Rosin Core Solder Rolls and Pocket Packs

141778CP 32117CP

170456CP 73576CP

Part No.	Mfr.	Tin	Lead	Silver	Dia. (In.)	Wt. (lbs.)	1	10	50	100
73576CP	Kester (pak)	60	40	0	.031	0.04	$2.59	$2.35	$1.99	$1.85
32117CP	Kester	60	40	0	.031	1.00	13.19	11.89	10.69	9.59
73605CP	Kester (pak)	62	36	2	.020	0.10	1.75	1.49	1.31	1.15
112344CP	Kester	63	37	0	.020	1.10	16.95	15.29	13.95	12.95
151474CP	Kester *	63	37	0	.031	1.00	13.95	12.59	11.35	10.19
170456CP	Golden	60	40	0	.031	0.06	1.39	1.19	.89	.59
141794CP	Super	60	40	0	.031	0.55	5.95	5.39	4.85	4.35
141786CP	Super	60	40	0	.031	1.10	7.95	6.95	6.25	5.59
141778CP	Super	60	40	0	.031	2.20	13.95	12.95	11.95	10.95

The % Composition columns (Tin, Lead, Silver) and Pricing columns (1, 10, 50, 100) are grouped headers.

* Organic core

Lead-Free Solder Tip Tinner

Use will prevent oxide buildups and tin depletion on the tip which will increase tip life and heat transfer resulting in a better solder joint!
• 0.7 oz. tin with self adhesive pad

Safe and Effective!

Part No.	Description	1	10	50
132986CP	Lead-free tip tinner	$4.95	$4.59	$4.19

5' No-Clean Desolder Braids

Meets all of the most stringent soldering standards for worldwide application including: MIL-F-142560D Type R, NASA specification NHB5300.4, NPC200-4 and SP-5002.
• Length: 5'

139951CP 124126CP

TECHSPRAY

Part No.	Description	1	10	100
139951CP	.030"W desolder braid	$2.25	$1.95	$1.75
124126CP	.060"W desolder braid	2.25	1.95	1.75
124118CP	.075"W desolder braid	2.25	1.95	1.75

5' Desoldering Braids

• Easy to use handy dispenser
• Braided copper with flux

41099CP

Part No.	Description	1	10	100
41081CP	.079"W braid (5')	$1.49	$1.20	$.95
41099CP	.098"W braid (5')	1.55	1.29	1.15
153461CP	.120"W braid (5')	1.59	1.39	1.25

One-Shot Desoldering Gun

This low maintenance desoldering gun with self-contained vacuum pump is perfect for desoldering through-hole components.
• Power consumption: 60W
• Interchangeable standard tips
• Zero static tip, 3 wire grounded
• Sensitive where CMOS protection is needed
• Quick release stainless solder collector
• Electronic temperature control
• Ergonomic, lightweight design
• 120VAC • One-year warranty
• Gun casing size: 7.0"L x 4.0"W • Weight: 2.2 lbs.

Includes: 1.0mm tip

Part No.	Description	1	10	25
129066CP	Desolder gun	$99.95	$89.95	$79.95
140214CP	"Y" replacement tip	10.95	9.95	8.95
134594CP	1.0mm replace. tip	8.95	7.95	7.19
134607CP	1.2mm replace. tip	8.95	7.95	7.19

See page 187 for Soldering Book

Soldering Tip Cleaner with Stand and Rosin Paste Flux

156777CP:
• For cleaning soldering iron tips without the use of water and sponge
• Metal wool for cleaning
• Rubberized base for stability

156777CP 73584CP

73584CP: Highly active non-corrosive and non-conductive flux with excellent wetting action

Part No.	Description	1	10	50
156777CP	Tip cleaner & stand	$4.95	$4.49	$4.05
160004CP	Metal wool replacement	2.79	2.49	2.29
73584CP	Rosin paste flux (2 oz.)	1.79	1.65	1.45

SALE Desoldering Wick

No more burnt fingers
• Handy dispenser • Length: 5'
• Pure copper braid • No clean flux formula

Part No.	Description	1	10	25
175986CP	0.067"W braid	$2.49	$1.99	$1.79

Solder Bars

• Used for soldering pots
• 25 Tin/lead
• Size: 13"L x 0.9"Dia.

170464CP

Part No.	Description	Wt. (lbs.)	1	10	25
176057CP	60/40	1.1	$8.49	$7.65	$6.89
170464CP	63/37	1.8	6.95	6.60	6.25

Clip-On Heat Sink

• Absorbs and dissipates heat during soldering and desoldering sensitive parts
• Size: 2.7"L x 0.7"W

Part No.	Mfr. Cross Ref. No.	1	10	25
159126CP	HT156	$2.49	$2.25	$1.99

Heat Sink and 7-Piece Soldering Aid Kit

100503CP

100378CP

100378CP: Heat sink absorbs and dissipates heat during soldering & desoldering of sensitive parts
100503CP contains: Soldering wick, 3 pc. scraper set, acid brush, clip-on heat sink and empty squirt bottle

Part No.	Description	1	10	50
100378CP	Heat sink	$.85	$.74	$.59
100503CP	Soldering kit	4.95	4.49	3.95

300-Watt Solder Pot

Temperature Regulated between 420 – 450˚C
• HI/LO switch selectable for temperature
• 2 conductor power cord; 5' 9" long
• Holds up to 1 bar of P/N 170464CP or 176057CP, left below
• Input voltage: 110VAC @ 2.7A; 50-60Hz
• Size: (unit) 4.8"H x 5.5" Dia. (base)
• Size: (tub) 2.4"Dia. x 1.6"D
• Weight: 5.9 lbs. • One-year warranty

Part No.	Description	1	10	25
160303CP	300W solder pot	$64.95	$58.49	$52.65

600-Watt Solder Pot

Temperature Adjustable
• 2-prong power cord (5'5")
• Tin boiler temp.: 0˚C to 500˚C
• Self regulating temperature
• On-off power switch and LED indicator for heat
• Input voltage: 110VAC @ 5.5A
• Holds up to 3 bars of P/N 170464CP or 176057CP, below left
• Size (unit): 6.8"L x 5.5"W x 2.8"H
• Size (tub): 3.9"L x 1.6"D • Weight: 7.4 lbs.

Includes: Skimmer and removable dross tray

Part No.	Description	1	10
172275CP	600W solder pot	$189.95	$159.95

2000-Watt Solder Pot

• Thermostat control for setting temperature from 50°C to 300°C
• Holds up to 48 bars of P/N 170464CP or 176057CP, left
• Input voltage: 110V @ 18A 50-60Hz single phase
• 3 conductor pigtail power cord: 5' long
• Size (unit): 18.1"L X 11.5"W X 6.0"H
• Size (tub): 12.0"L X 8.0"W X 2.9"H
• Weight: 23.1 lbs. • One-year warranty

Part No.	Description	1	5
149876CP	2000 watt solder pot	$399.95	$359.95

Solder Stand

• 12 pc. solder stand (some assembly required)
• Size: 3.6"W x 3.9"D x 4.3"H
• Shaft dia.: 0.6" • Weight: 1.6 lbs.

Solder not included

Part No.	Description	1	10	100
141760CP	Solder stand	$8.95	$7.95	$6.95

Solder Spool and Iron Stand

• 4 pc. stand (some assembly required)
• Shaft diameter: 0.6"
• Size: 6"L x 3.5"W x 3.1"H
• Sponge size: 1.6"W x 2.4"L
• Weight: 2.0 lbs.

Solder not included

Part No.	Description	1	10	100
169551CP	Spool & iron stand	$14.95	$13.49	$12.15

Plastic Pump Bottle

• 6 oz. bottle
• ESD compliant
• Plastic bottle with dispenser cover

Part No.	Description	1	10	50
158131CP	Pump bottle	$9.95	$8.95	$7.95

Color Code Legend: New Sale Qty. Save Closeout

Analog Display Soldering Stations

Maintains a steady temperature using a cartridge heating element, providing a longer life for the solid soldering tip.

SMD Tip Below — 114569CP

183177CP

- Electronic temperature control: 300°F to 850°F
- CMOS devices protected against voltage spikes
- Power consumption: 60W
- Weight: 4.1 lbs.
- Size: 4.3"W x 6.0"D x 3.4"H

Includes: One 1/16" tip (P/N 35115CP – below)

Part No.	Product No.	Description	1	10	25
114569CP	168-3C	Analog display station	$94.95	$84.95	$76.95
183177CP	XY9-60A	Analog display station	99.95	89.95	79.95
134640CP	SP815	Replacement sponge for P/N 114569	2.99	2.69	2.49
134631CP	SP715	Replacement sponge for P/N 183177	2.99	2.69	2.49

Desoldering & Soldering/Desoldering Stations

- Simple fine tune feature to select 300–850˚F range
- Vacuum pump activated "on demand" using finger tip switch on desolder handle
- CMOS devices protected against voltage spikes
- Replacement sponge for P/N 125516CP – see above (P/N 134631CP)
- One-year warranty

125508CP

125516CP

125508CP: Size: 9.2"L x 7.2"W x 3.6"H; Weight: 13.1 lbs.
Includes: 3/64" conical tip and solder holder
125516CP: Size: 11"L x 10"W x 4.0"H; Weight: 18.1 lbs.
Includes: 1/32" conical tip, solder holder, tip cleaner and tweezers

Special 5% Bundle Bonus

Complete digital solution for an ISO 9000 Soldering/Desoldering Station –

P/N 125508CP & 162456CP Sold separately $439.90

Combined: P/N 207263CP $407.95

Part No.	Product No.	Description	1	10	25
125508CP	968	Desoldering station	$309.95	$278.95	$251.95
125516CP	988	Soldering/desoldering station	409.95	368.95	331.95
207271CP	TWZ60ESD	SMD tweezer iron w/ .078" tip	69.95	62.95	56.95
207221CP	D1A60A	Replacement desoldering iron	74.95	67.49	59.95
168583CP	46-060102	Tip .078" for P/N 207271CP	11.95	10.79	9.69
168591CP	46-060115	Tip .590" for P/N 207271CP	12.95	11.69	10.49

Temperature Controlled 45-Watt Soldering Station

Grounded Soldering Tip

- 500°F to 850°F
- Fully grounded
- Insulated ceramic heating element for rapid heat-up and heat recovery • Wt.: 2.5 lbs.
- Heater insulation exceeds 100MΩ
- Zero voltage circuitry eliminating high voltage spike and magnetic field generation • Size: 7.0"L x 4.5"W x 3.5"H

Includes: Manual and 1.2mm diameter conical tip

156785CP

Part No.	Product No.	Description	1	10	25
156785CP	379	Soldering station	$69.95	$62.95	$56.95
156814CP	XYB01	Sharp conical chisel 1/32" tip	4.95	4.49	3.95
156822CP	XYB04	Conical chisel 1/16" tip	4.95	4.49	3.95
134631CP	SP715	Replacement sponge for P/N 156785CP	2.99	2.69	2.49

Digital Display Soldering Station

ESD Safe!
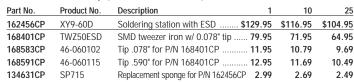
Designed for soldering situations where precise temperature is required for sensitive components.

- Temperature is maintained at ±6°F
- Electronic temperature control from 392° to 878°F
- External calibration port
- CMOS devices protected against voltage spikes
- Power consumption: 60 watts
- Power-on and Heater-on LED indicators
- Size: 5.1"W x 8.0"D x 4.0"H • Weight: 4.8 lbs.

Includes: One 1/16" tip (P/N 35115CP – below)

162456CP

168401CP

Part No.	Product No.	Description	1	10	25
162456CP	XY9-60D	Soldering station with ESD	$129.95	$116.95	$104.95
168401CP	TWZ50ESD	SMD tweezer iron w/ 0.078" tip	79.95	71.95	64.95
168583CP	46-060102	Tip .078" for P/N 168401CP	11.95	10.79	9.69
168591CP	46-060115	Tip .590" for P/N 168401CP	12.95	11.69	10.49
134631CP	SP715	Replacement sponge for P/N 162456CP	2.99	2.69	2.49

We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

It's that simple!

Tips & Replacement Parts For XYTronic Soldering and Desoldering Products

35326CP   35078CP   35334CP   35115CP/156822CP   35238CP   207335CP   207351CP   207343CP   140231CP   156814CP

Part Number	Product Number	Description	134ESD	200GX, 200PHG, 168*	AESD/IDESD, 379	XY960A/960D*	968	988	999SDA*	JS1258*	168-3C	2660*	1	10	25
35326CP	XY401	Soldering tip - conical bevel 1/32"		✓	✓	✓			✓	✓	✓		$4.49	$3.95	$3.65
35078CP	XY402	Soldering tip - semi-chisel 1/32"		✓	✓	✓			✓	✓	✓		4.49	3.95	3.65
35334CP	XY403	Soldering tip - conical sharp 1/64"		✓	✓	✓			✓	✓	✓		4.49	3.95	3.65
35115CP	XY404	Soldering tip - conical chisel 1/16"		✓	✓	✓			✓	✓	✓		4.49	3.95	3.65
35238CP	XY405	Soldering tip - semi-chisel wide 1/8"		✓	✓	✓			✓	✓	✓		4.49	3.95	3.65
207335CP	XY406	Soldering tip - long conical chisel 3/64"		✓	✓	✓			✓	✓	✓		2.95	2.69	2.39
207351CP	XY410	Soldering tip - chisel 3/16"		✓	✓	✓			✓	✓	✓		2.95	2.69	2.39
207343CP	XY411	Soldering tip - wedge 3/16"		✓	✓	✓			✓	✓	✓		2.95	2.69	2.39
140231CP	XY430	Soldering tip - SMD flat pack 7/32"		✓	✓	✓			✓	✓	✓		8.95	7.95	7.25
156814CP	XYB01	Soldering tip - sharp conical chisel 1/32"	✓		✓				✓				4.95	4.49	3.95
207301CP	XYB02	Soldering tip - conical semi-sharp 1/32"	✓		✓				✓				4.95	4.49	3.95
207327CP	XYB03	Soldering tip - conical sharp 1/64"	✓		✓				✓				4.95	4.49	3.95
156822CP	XYB04	Soldering tip - conical chisel 1/16"	✓		✓				✓				4.95	4.49	3.95
207298CP	XYB05	Soldering tip - semi-wide chisel 1/8"	✓		✓				✓				4.95	4.49	3.95
207280CP	XYB06	Soldering tip - long conical chisel 3/64"	✓		✓				✓				4.95	4.49	3.95
207319CP	XYB30	Soldering tip - wedge blade 3/16"	✓		✓				✓				8.95	8.09	7.25
35191CP	XY25	Soldering tip - conical sharp 1/64"										✓	6.49	5.85	5.25
35297CP	XY37	Heating element- (nichrome)		✓	✓	✓			✓		✓		20.95	18.95	16.95
35318CP	XY48	Assembly - 60W w/ nichrome heater		✓	✓	✓			✓		✓		30.95	27.95	24.95
127634CP	XYD10	Desoldering tip - 1.0mm (.0394")					✓	✓	✓				8.95	7.95	7.25
127642CP	XYD12	Desoldering tip - 1.2mm (.0472")					✓	✓	✓				8.95	7.95	7.25
127651CP	XYD15	Desoldering tip - 1.5mm (.0586")					✓	✓	✓				8.95	7.95	7.25

For XYTronic Model Numbers (*Previous Models)

207301CP
207327CP
207298CP
207280CP
207319CP
35191CP
35297CP
35318CP
127634CP
127642CP
127651CP

Fume Extractors and Filters

Absorbs noxious lead fumes using activated-carbon filter and a high-efficiency fan

- Operate continuously providing filtered air
- Air flow: 115 CFM
- Compact size allows use on work bench with minimum space
- 120VAC, 60Hz, 22 watt
- On/off power switch
- Aerodynamic hood design for effective removal of solder fumes
- Noise: 49dB fan
- Fuse protected
- Static ground jack
- Removable carbon-impregnated filter
- One-year warranty

168268CP:
- High carbon plastic case
- Size: 8.5"W x 5.0"D x 8.0"H
- Weight: 4.2 lbs.

120150CP:
- Black anodized aluminum case
- Size: 6.4"W x 4.6"D x 7.9"H
- Weight: 4.6 lbs.

Includes: Detachable power cord

168268CP

120150CP

Part No.	Description	1	10	25
168268CP	Fume ext. (ESD safe)	$59.95	$53.95	$49.95
120150CP	Fume extractor	79.95	71.95	64.95
127183CP	Replace. filters (2/pk)	10.95	9.95	8.95

Combination 42-Watt Soldering Station and Fume Extractor

- Power consumption: 42W @ 650˚F (soldering iron)
- Adjustable knob for temperature control (temperature range: 250˚ to 430˚C; (500˚ to 800˚F)
- Stability @ idle: ±5˚C (9˚F)
- Maximum air volume: 95/115CFM
- Electronic zero-voltage switching
- LED indicator for pilot light & lighted on-off switch
- Input voltage: 100/120VAC @ 60Hz
- Size: 6.4"W x 7.8"H x 4.7"D
- Weight: 5.2 lbs.

Includes: Soldering iron, soldering holder, sponge, carbon activated filter, power cord and manual

Part No.	Product No.	1	10	25
183169CP	456DLX	$109.95	$82.49	$72.15

For Jameco's latest products see pages 207-213.

Weller® 40-Watt Soldering Station

- Lighted on/off switch
- Adjustable power from 5 watts to 40 watts
- 40 watt,120V @ 60Hz
- Temperature is electronically controlled from 350˚ to 850°F
- Size: 5.5"L x 4.5"W x 3.5"H   • Weight: 1.9 lbs.

Includes: ST3 1/8" screwdriver tip, soldering station and manual

Part No.	Prod. No.	Description	1	10
146595CP	WLC100	Soldering station	$49.95	$44.95

Weller® Soldering Tips

Replacement Tips for WLC100, WP25 & WP23

146608CP   **146616CP**   **146624CP**

Part No.	Prod. No.	Description	1	10
146608CP	ST1	Screwdriver tip 1/16"	$5.95	$5.35
146616CP	ST3	Screwdriver tip 1/8"	5.95	5.35
192129CP	ST4	Scrwdriver tip .187"	4.35	3.95
192137CP	ST5	Flat tip .031"	3.95	3.55
192145CP	ST6	Scrwdriver tip .031"	5.25	4.75
146624CP	ST7	Conical tip 1/32"	5.95	4.95

40-Watt Digital Soldering Station

- Microprocessor controller for accuracy and dependability
- Digital LED display allows you to read temp. setting and actual tip temp. – accuracy for most demanding applications
- Temp. accuracy: calibrated to ±9°F
- Temp. stability: ±10°F
- ESD safe to protect sensitive components
- Quick disconnect plug for soldering iron and lighted on/off switch   • Weight: 4.5 lbs.
- 120VAC @ 60Hz input   • Size: 5.9"L x 4.5"W x 3.6"H

Includes: EC1201A 40W soldering iron

Part No.	Prod. No.	Description	1	10
191994CP	EC2002M1	Solder Station	$299.99	$305.95

42-Watt Controlled Output Soldering Station

Weller®

- Transformer powered soldering station complete with macro style, low voltage, temp. controlled soldering iron
- Closed loop method of controlling max. tip temp. – for protection of temp. sensitive components
- Power unit housing features impact resistant plastic for durability   • Size: 5.9"L x 4.5"W x 3.6"H
- Quick disconnect plug for soldering iron and lighted on/off switch   • Uses PT series tips
- Separate conductor grounds iron tip and terminates third pin of power cord   • Weight: 4.0 lbs.
- 120VAC @ 60Hz input
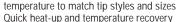
Includes: Soldering iron and PTA7 tip (below)

Part No.	Prod. No.	Description	1	10
170552CP	WTCPT	Solder station ...	$129.95	$124.95
192161CP	TC201T	Replac. iron	68.95	62.05
192170CP	PTA6	.062" screwdriver tip (600˚F)	6.95	6.25
192188CP	PTA7	.062" screwdriver tip (700˚F)	5.69	5.15
192196CP	PTA8	.062" screwdriver tip (800˚F)	5.69	5.15

Weller® 50-Watt Controlled Output Soldering Station

ESD Safe

- 50 watts of controlled power
- Temperature lockout prevents raising of temperature to high levels
- Temperature calibration allows user to reset temperature to match tip styles and sizes
- Quick heat-up and temperature recovery
- Temperature range: 350˚F - 850˚F (177˚C - 454˚C)
- Accuracy within 9˚F (5˚C)   • Automatic shut-off
- Size: 5.9"L x 4.5"W x 3.6"H   • Weight: 4.2 lbs.
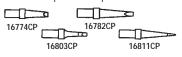
Part No.	Prod. No.	Description	1	10
166879CP	WES50	Soldering station	$115.95	$105.95

Weller® Soldering Tips

Replacement Tips for WES50

- Tip leakage: less than 2mV
- Tip to ground resistance: less than 2Ω
- Tips also used with WCC100 station
- Additional tips can be special ordered
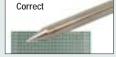
16774CP   **16782CP**   **16803CP**   **16811CP**

Part No.	Prod. No.	Description	1	10
16774CP	ETA	Screwdriver 1/16" ...	$6.95	$6.25
16782CP	ETJ	Long screwdriver 1/32"	6.95	6.25
16803CP	ETR	Narrow scrwdrvr 1/16"	6.95	6.25
16811CP	ETS	Long conical 1/64"	6.95	6.25

Soldering Tip

What is the correct way to solder?

Incorrect   **Correct**

Follow these three steps:

Step One: The connection to be soldered must be clean. A small file, sanding pen or steel brush can be used if needed. A good soldered connection also requires a good mechanical connection. Make sure that wires are firmly attached to terminals or each other before soldering.

Step Two: When using a new soldering tip, coat the tip with solder to prevent oxides from forming, then immediately brush off the excess with a soft cloth to form a smooth, silvery soldering surface. This process is referred to as "tinning".

Step Three: Apply tapered surface of the soldering iron tip to the connection. Allow connection to become hot, then apply solder (see picture above). Don't use the point to melt solder – let the connection melt it to avoid "cold" solder joints. When soldering delicate components, work quickly and use a heat sink to draw off damaging heat.

EZ DIGITAL
20MHz Dual-Trace Oscilloscope

Blue CRT for higher resolution!

SALE

- 6" rectangular high-resolution blue CRT with internal graticule & scale
- Vertical deflection: 5mV/div to 5V/div in 10 calibrated steps
- Horizontal deflection: 0.2μs/div to 0.2s/div in 19 calibrated steps, 1-2-5 sequence
- Max. signal input voltage: 250V (DC and peak AC)
- ADD function measures sum of two signals
- Input voltage: 98-125VAC @ 1A, 198-225VAC @ 0.5A, 50-60Hz, 45W
- Two-year manufacturer's warranty
- Size: 16.4"L x 12.6"W x 5.3"H • Weight: 20.8 lbs.

Includes: Two (X1/X10) 40MHz probes, power cord, manual, and block diagram

Part No.	Prod. No.	Description	1	10
136098CP	OS5020	20MHz scope ...	$399.95	$359.99

EZ DIGITAL
20MHz Dual-Trace Oscilloscope with 1MHz Function Generator

- Basic specs same as OS5020 (above)
- **7 Function generator**
- Frequency range: sine, triangle, square, TTL pulse
- Output impedance: 50Ω • Output voltage: 14Vp-p
- Two-year manufacturer's warranty
- Size: 12.6"L x 12.6"W x 6.8"H • Weight: 23.8 lbs.

2 Instruments in 1

Includes: Two (X1/X10) 40MHz probes, power cord, manual, BNC to alligator, and cable

Part No.	Prod. No.	Description	1	10
94650CP	OS5020G	Func. gen.	$529.95	$499.95

Dual-Channel 150MHz Digital Oscilloscope

- Repetitive B/W: 150MHz
- Sample rate: 100MS/s max. (real time)
- Record length: 32k
- Resolution: 8-bits
- 5.7" mono LCD display (320 x 240)
- Math functions and set-up save/recall

EZ DIGITAL

- Automatic measurement amplitude, auto set-up of vertical, horizontal D.F., & trigger level
- Vertical sensitivity: 2mV/div to 5V/div
- Input impedance: 1MΩ or 50Ω, 20pF nominal
- Max. input: 300V@1MΩ; 5V @ 50Ω
- Horizontal time base range: 2ns/Div to 5s/Div
- Trigger sensitivity: DC – 10MHz, 0.5 Div.
- Input voltage: 90 to 250VAC @ 48-440Hz
- Size: 12.9"L x 12.3"W x 5.9"H • Weight: 13.2 lbs.

Includes: Two (X1/X10) 250MHz probes, power cord, and operations manual

Part No.	Product No.		1	5
201865CP	DS-1150		$1,599.95	$1,439.95

100MHz Notebook DSO with 3¾-Digit DMM

- Extra bright 5" backlit LCD display
- Direct hardcopy through RS-232 interface

Oscilloscope:
- Vertical axis: 8-bits resolution with 1mV/div to 5V/div in 12 steps; 1MΩ/25pF input impedance
- Horizontal axis: 25MS/s real time sampling rate; 5ns/div to 9.5s/div real time sampling rate
- Math parameter of amplitude, frequency, period, pulse width, duty cycle
- Arithmetic functions (addition, subtraction, inversion)
- Two channels and dual digitizers
- Low drift and internal noise
- CH1, CH2 turned on or off independently
- Auto set-up and tracking

EZ DIGITAL

4,000-Count 3¾ Digit Multimeter:
- DC/AC voltage ranges: 400mV to 400V in 4 ranges with resolution of 0.1mV to 100mV
- Resistance ranges: 400Ω to 400MΩ in 5 ranges with resolution of 0.1Ω to 1KΩ
- Diode test, continuity test, minimum/maximum/ relative hold

Includes: Serial cable, software, oscilloscope probes, multimeter probes, power supply, and NiCad battery.

Part No.	Product No.	Wt. (lbs.)	1	5
190924CP	OS310M	8.6	$1,399.95	$1,259.95

100MHz Delayed Sweep Oscilloscope w/ Frequency Counter
2 Channel, 4 Trace

- DC to 100MHz bandwidth
- 6" rectangular CRT with internal graticule
- Auto set, readout cursor, delay sweep, hold-off functions
- Z-axis intensity modulation: DC to 2MHz bandwidth; 30VDC + peak AC max. input voltage
- Vertical deflection factor: 2mV/div to 5V/div
- Horizontal time base A/B deflection: 5ns/div to 0.5s/div in 22 calibrated steps
- Input coupling: AC, GND, DC • Rise time: 3.5ns or less

EZ DIGITAL

Includes: Two (X1/X10) 100MHz probes, power cord, and operations manual

Part No.	Product No.	Wt. (lbs.)	1	5
190932CP	OS5100RB	17.6	$1,099.95	$989.99

20MHz Dual-Trace Oscilloscope With Built-in Component Checker

- 6" rectangular CRT with internal graticule
- Built-in component checker/tester for resistors, capacitors, coils, diodes
- Vertical sensitivity: 5mV/div to 20V/div in 12 calibrated steps (1-2-5 sequence) • Input impedance: 1MΩ + 20pF
- Max. input (vertical amplifier): 300VDC or AC peak
- Horizontal sweep time: 0.2s/div to 0.5s/div in 20 calibrated steps (1-2-5 sequence)
- Internal trigger sensitivity: 20Hz to 20MHz
- Size: 17"L x 14"W x 5.75"H

Protek
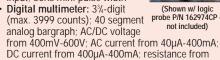
Includes: Two (X1/X10) 60MHz probes, power cord, and operations manual

Part No.	Product No.	Wt. (lbs.)	1	5
201857CP	P-3502C	15.5	$429.95	$386.95

Handheld 20MHz Digital Oscilloscope & Multimeter

METEX

162430CP

- 4-in-1 test equipment: digital oscilloscope, DMM, frequency counter and logic analyzer
- Easy-to-read LCD display
- **Oscilloscope**: 2-channel input, 5mV-2V/div; DC-20MHz(-3dB); 50ns - 0.5us/div; 20 MS/s sampling rate
- **Logic analyzer:** 8 inputs; 1.4V threshold level; 35VDC max. input; 50ns min. pulse width
- **Digital multimeter:** 3¾-digit (max. 3999 counts); 40 segment analog bargraph; AC/DC voltage from 400mV-600V; AC current from 40μA-400mA; DC current from 400μA-400mA; resistance from 400Ω-40MΩ; continuity & diode testing
- **Frequency counter:** 5Hz-20MHz; 5 digit max.; autoranging; AC/DC/DC input coupling; ±10ppm accuracy; 35Vrms/42V-P/60VDC max. input
- Oscilloscope probes use P/N 22891CP/66149CP/ 140687CP, pg 137 • One-year warranty
- Battery required for portable use (see below)
- Size: (unit) 10.0"L x 5.0"W x 2.0"H • Wt.: 9.2 lbs.

(Shown w/ logic probe P/N 162974CP – not included)

Includes: Manual, 5VDC @ 3A power supply, power cord, DMM test leads, holster and case

Part No.	Description	1	5
162430CP	20MHz digital scope	$799.95	$749.95
162974CP	Logic probe	59.95	53.95
163141CP	Rechargeable battery	45.95	41.49
162966CP	RS-232 cable and software	26.95	24.25

TPI
Handheld 20MHz 2-Channel Digital Oscilloscope and True RMS DMM
Model 460

SALE

- RS-232: optically isolated output
- Bright 3" x 3" backlit LCD screen
- Adjustable contrast • Cursor readout
- Continuous autoset • Decibel measurement
- Meets Cat III 600V industrial power system standards • Three-year warranty

Oscilloscope:
- 20MHz bandwidth • 25MS/s sampling rate
- Dual input to view two waveforms on the display for comparison and troubleshooting
- Vertical: sensitivity - 50mV to 200V/div.; 8-bits resolution
- Horizontal: equivalent sampling - 50nS to 500nS/div.; real time sampling - 1 μS to 2s/div.
- Trend mode: plot time - 30sec/div to 1 hours/div.; max./min. selectable plot data type; 2 screen memory
- Waveform: vertical 8 divisions of 20 pixels

4,000-Count TRUE RMS Auto Ranging DMM with Dual Inputs:
- DC/AC voltage ranges (CH1 & CH2): 400mV to 600V in 5 ranges with 0.1mV to 1V resolution
- Frequency ranges (CH1 & CH2): 1Hz to 20MHz in 7 ranges
- Resistance ranges (CH1 only): 400Ω to 20MΩ in 6 ranges
- Continuity and diode test

Free RS-232 cable & software – $69.99 value

Includes: AC charger, 2 banana to BNC adapters, 0-60MHz oscilloscope probe, high-performance test leads, and manual

Part No.	Description	1	5
195231CP	460 Oscilloscope	$848.95	$838.95

Handheld Oscilloscope and Multimeter

FREE Protective Boot – $19.95 value!

Six Units in One!

- 4,000 count True RMS DMM
- 1MHz bandwidth oscilloscope
- 20MHz sampling rate
- Logic test   • Frequency counter
- Trend mode allows recording of sine waves for a period of time
- Component test   • Three-year warranty

Includes: AC charger, test leads & manual

Part No.	Description	1	5
160805CP	440 digital oscilloscope ...	$349.95	$339.95
168330CP	RS-232 software and cable	69.95	62.95

Digital Handheld Oscilloscope

- 5MHz for repetitive signals; 0.5MHz for single shot events
- Input impedance: 1MΩ/20pF
- Maximum input voltage: 100V peak (AC + DC)
- Input coupling: DC, AC, and GND (GND for auto zero reference)
- LCD graphics display: 64 x 128 pixels (64 x 96 pixels for signal)
- High contrast LCD display w/ 3.3" viewing angle
- Vertical resolution: 8-bit (6-bit for LCD)
- Timebase range: 2µs to 20s/div
- Input sensitivity: 5mV to 20V/div   • Screen hold
- Trigger mode: run, normal, once, and ± slope
- True RMS and dB measurements   • Linearity: ±1 bit
- Recommend 9VDC @ 300mA power supply (P/N 133891CP, pg 52) • Size: 8.7"L x 4.2"W x 1.5"H
- Batteries not included, recommend P/N 32627CP or P/N 151087CP, pg 200   • Weight: 1.6 lbs.

Includes: Insulated BNC to alligator clip measurement probes and case

SALE

Part No.	Description	1	5
168823CP	5MHz scope (Model HPS5)	$168.95	$158.95

Digital 1GHz PC Oscilloscope Plus Spectrum Analyzer and Transient Recorder

This digital PC oscilloscope also features spectrum analyzer & transient recorder functions & functions through the Windows® interface.

- Sampling frequency: (real-time) 1.25kHz–50MHz; (repetitive) 1GHz
- Inputs: 2 channels, 1 external trigger input
- Input impedance: 1MΩ / 30pF
- Max. input voltage: 100V (AC and DC)
- Power required: 9V to 10V @ 1000mA (recommend P/N 100888CP, pg 52)   • Parallel Port Interface

Oscilloscope: • Timebase: 20ns–100ms per division
- Input sensitivity: 5mV–15V per division with auto step-function
- Recording length: 4096 samples per channel

Spectrum Analyzer: • Frequency range: 0 to 25MHz

Transient Recorder:
- Time scale: 20ms/div–2000s/div
- Max. recording time: 9.4 hours/screen
- Max. number of samples: 100/s
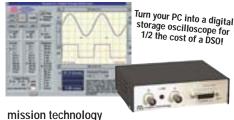
System requirements: IBM compatible PC, Windows® 95/98/ME, SVGA card, mouse, printer port, CD-ROM

Includes: 2 test leads, PC parallel cable, manual and CD-ROM software

Part No.	Product No.	1	5
200184CP	PCS500	$478.95	$429.95

PC-MultiScope 100MHz Dual-Channel DSO

Turn your PC into a digital storage oscilloscope for 1/2 the cost of a DSO!

mission technology

- 100MHz sampling; dual channel
- Chart recorder and FFT mode
- 5mV to 5V per div.; 20MHz bandwidth; ext. trigger
- 0-4MHz sine and square wave signal generator
- Triple power supply; 5VDC @ 500mA and ±0-8VDC @ 250mA
- Size: 4.3"L x 5.0"W x 1.5"H   • Weight: 3.8 lbs.
- One-year warranty

Includes: Parallel port cable, AC adapter, alligator clip probe, Windows® 3.1/95/98 software

Part No.	Description	1	10
163230CP	PC-MultiScope 3	$579.95	$529.95

Protek ISA Digital Oscilloscope Card for Windows®

Dual Channel PC-Based DSO

- 20MS/s sample rate per channel
- 8-bit resolution
- Amplitude: max. 300V + pk
- Auto setup: 30Hz to 2MHz, 35V p-p max.
- Impedance: 1MΩ 25pF
- External trigger coupling: AC
- Trigger levels: ±3 div   • Trigger type: analog
- Time range: 50ns/div to 0.5s/div 1-2-5 22 step
- Input range: 50mV/div to 5V/div 1-2-5 7 step
- One-year warranty

System requirements: IBM PC 486, Pentium® or compatible; 8MB of RAM; VGA graphics card and monitor; 8-bit ISA slot and Windows® 95/98

Includes: CD-ROM software, driver, manual & probes

Part No.	Description	1	5
153568CP	Oscilloscope card	$229.95	$209.95

100MHz Dual-Trace Oscilloscope

EZ DIGITAL

- 2-channel dual trace
- Delay line
- Auto focusing according to intensity
- Two-year warranty
- Weight: 22.8 lbs.
- Size: 16.9"L x 12.6"W x 5.5"H

Includes: Two (X1/X10) 100MHz probes, power cord, and operations manual

Part No.	Prod. No.	Description	1	5
121179CP	OS5100	Oscilloscope	$1,195.95	$1,075.39

Pomona®   100MHz Probe Set

- Complete accessory kit included
- Attenuation: x1/x10
- Bandwidth: 15/100MHz (-3dB)
- Risetime: 23.33/3.5ns
- Input resistance: 1/10MΩ
- Capacitance: 64/10.5pF
- 48" cable
- Compensation range: NA/10~60pF

Part No.	Product No.	Description	1	10
156451CP	4550B	Probe kit	$51.95	$46.95

PROBE MASTER Oscilloscope Probes

Designed for use with Tektronix and Hewlett Packard oscilloscopes.

- 3 position switch: x1, ref, x10
- Bandwidth @ 3dB: 10MHz (x1); 150MHz (x10)
- Loading: 57pF, 1MegΩ (x1); 15pF, 10MegΩ (x10)
- Low-resistance gold contacts
- Cord length: 5'

174473CP: 7-piece kit
212214CP/212257CP: 25-piece kit

174473CP

212214CP

Part No.	Product No.	1	10	50
174473CP	4901-02 (150MHz) ..	$49.95	$44.99	$40.49
212214CP	4915 (150MHz)	149.99	142.49	142.49
212257CP	4915A (250MHz)	159.99	151.99	151.99

Modular Oscilloscope Probes

- 60MHz, 100MHz, 250MHz
- Hook and pointed probes
- **216047CP/140687CP**: with IC test ground cover and spring ground contact
- Alligator clip ground wire
- Maximum input voltage: 600V
- BNC male connector   • Length: 5'

22891CP

140687CP

Part No.	Mfr. Cross Ref. No.	Bandwidth (±3dB)		Impedance (R/C)*		Pricing		
		Attenuation		Attenuation				
		x1	x10	x1	x10	1	10	50
22891CP	LF101E	6MHz	60MHz	1MΩ/180pF	10MΩ/22pF	$22.95	$20.79	$18.69
216047CP	HF-9100	6MHz	100MHz	1MΩ/47pF	10MΩ/16pF	34.95	29.95	26.95
140687CP	LF290	6MHz	250MHz	1MΩ/150pF	10MΩ/14pF	45.95	41.39	37.25

* with oscilloscope input 20pF

Jameco carries test leads, plugs and binding posts that are perfect for your applications!

Color Code Legend
New Sale Qty. Save

2-Channel, 1.5GHz Frequency Counter

- Frequency, period, totalize, RPM
- Gate time: 0.01s, 0.1s, 1s, 10s
- 9-digit green LED display
- Input power: AC 110V/220V ±10%, 50-60Hz
- Size: 10.3"L x 10.0"W x 3.2"H
- Weight: 5.3 lbs. • One-year warranty

Includes: Fuse, manual and BNC cable

EZ DIGITAL

Channel	Frequency Range	Resolution
A	0.1Hz-150MHz	0.1nHz-10kHz
B	50MHz-1.5GHz	0.1Hz-100kHz

Part No.	Product No.		1	5
55790CP	FC7150		$299.95	$259.95

2-Channel, 1.5GHz Universal Frequency Counter with Time Interval and Ratio

- Frequency range: 0.1Hz to 150MHz (A/B input); 50MHz to 1.5GHz (C input)
- Resolution: 1nHz to 10Hz
- Gate time: 0.01s, 0.1s, 1s, 10s
- Totalize, period and RPM function
- Sensitivity: 20Vrms (A, B input); 30Vrms (C input)
- Impedance: 1MΩ < 40pF (A, B inputs); 50Ω (C input)
- 9-digit LED green display
- Input voltage: 115/230VAC @ 50-60Hz (switchable)
- Size: 10.2"L x 10.0"W x 3.1"H • Weight: 6.0 lbs.

EZ DIGITAL

Part No.	Product No.		1	5
201873CP	FC-7150U		$359.95	$319.95

Fluke 123 20MHz Industrial Scopemeter® with FlukeView Software

Digital Scope, 15-Function Digital Multimeter & Recorder

The Fluke 123 is the ideal choice for troubleshooting industrial machinery, instrumentation, control and power systems. The Fluke 123 automatically recognizes signal patterns and sets up correct triggering, timing, and amplitude for stable displays.

- **Digital Scope:** dual-input 20MHz oscilloscope with 1.25GS/sec. repetitive sampling rate
- **Digital Multimeter:** dual-input 5000-count True RMS meter with ohms, capacitance & temperature
- **Recorder:** dual-channel TrendPlot™

FLUKE

FlukeView Software (Version 3.04)

- Documenting: transfer screens, waveforms & data to your PC for printing or importing to other programs
- Archiving: store and retrieve waveforms with text annotations and create your own library
- Analysis: gather valuable data and enable cursor measurement, extend recording of up to four user-selected measurements, upload waveforms and use cursors for detailed measurements
- Compatible with Windows® operation system
- Size: 4.5"W x 2.0"D x 9.1"H • Weight: 5.8 lbs.

Part No.	Model No.	Price
203131CP	Fluke 123/003SR ✷	$1,195.95

✷ Refurbished

METEX® 4-in-1 Universal System

With Function Generator, Universal Counter, DC Power Supply & Digital Multimeter

- **Function generator** capable of generating seven forms of waves (sine, square, triangle, skewed sine, ramp, pulse, and TTL square wave) in seven frequency ranges from 0.2Hz to 2MHz
- **Universal counter** capable of measuring frequency ranges from 5Hz to 1.3GHz
- **DC power supply** capable of generating 5V @ 2A, 15V @ 1A fixed and 0 to 30V @ 0 to 2A variable
- **Digital multimeter** with ranges of: DC voltage (400mV to 100V), AC voltage (400mV to 750V), DC/AC current (40mA to 20A), resistance (400Ω to 40MΩ), capacitance (4nF to 400µF) and forward resistance of a semiconductor junction in kΩ
- One-year warranty
- Size: 14.5"W x 14.0"D x 7.0"H • Weight: 37 lbs.

Save bench space & $800!

Includes: Manual, cables and software

Part No.	Product No.		1	5
160864CP	MS9150		$549.95	$499.95

2MHz Function Generator and 2.7GHz Frequency Counter

Function Generator: (2Hz - 2MHz)

- Wave forms: sine, square, triangle, skewed, ramp, pulse & TTL level square
- Frequency: 2Hz to 2MHz in 7 ranges
- Output impedance: 50Ω ±10%
- Output amplitude: 2 to 20Vpp at open load; 1 to 10Vpp at 50Ω load
- Offset variable range (max.): ±10VDC at open load
- Frequency sweep time: 20ms to 2s

Frequency Counter: (5Hz - 2.7GHz)
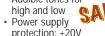
- Measuring range: channel A: 1Hz to 20MHz; channel B: 20MHz to 2.7GHz
- Input sensitivity: channel A: 20mVRMS sinewave or 100mVp-p; channel B: 40mVRMS for 20MHz to 1.3GHz; 70mVRMS for 1.3GHz to 2.7GHz
- Max. input voltage: channel A: 35Vp-p; channel B: 3Vp-p
- Input impedance: channel A, 1MΩ; channel B, 50Ω
- Size: 11.0"L x 8.2"W x 3.7"H
- Weight: 13.4 lbs.

METEX®

Includes: Coax & power cable, manual and software

Part No.	Description		1	5
192671CP	Function gen/counter........		$325.95	$293.39
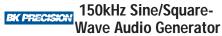
17MHz Logic Probe

- Max input frequency: 17MHz
- Minimum pulse width: 30ns
- Input impedance: 1MΩ
- Pulse flash time: 500ms
- Audible tones for high and low
- Power supply protection: ±20V
- TTL threshold: (Lo) 0.8V ±0.2V, (Hi) 2.3V ±0.2V
- CMOS threshold: (Lo) 30% VCC, (Hi) 70% VCC
- Size: 7.7"L x 1.0"W x 0.6"H

SALE

Part No.	Description	1	10	25
149930CP	Logic probe	$29.95	$26.99	$24.29

BK PRECISION 150kHz Sine/Square-Wave Audio Generator

Small and convenient, this audio generator can be used to test telco and audio equipment.

- 20Hz to 150kHz in 46 steps
- Low distortion R-C oscillator
- Variable output control
- Size: 5.9"L x 3.2"W x 0.8"H
- Output Impedance: 600Ω
- Weight: 0.7 lbs.
- One-year manufacturer's warranty

Includes: 9VDC battery

Part No.	Prod. No.	Description	1	10
166334CP	BK3001	Audio generator	$78.95	$71.95

2MHz Function Generator

- Frequency range: 0.02Hz to 2MHz
- Waveforms: sine, triangle, square, ramp, TTL pulse, skewed sine
- Variable waveform/duty cycle symmetry
- DC offset voltage from 0 to ±10V; can be superimposed to output waveform
- Output voltage: 20Vp-p (open circuit), 10Vp-p (into 50Ω)
- Input voltage: 110V/220V 50-60Hz
- One-year manufacturer's warranty
- Size: 10.0"L x 8.0"W x 3.0"H • Weight: 5.4 lbs.

EZ DIGITAL

Includes: Power cord, BNC to clip cable, fuse and manual

Part No.	Product No.	1	5	10
66069CP	FG8002	$189.95	$179.95	$169.95

5MHz Function Generator

Engineered for high reliability and user convenience.

- Waveforms: sine, square, triangle, and ramp
- 0.5 to 5MHz • 100% DC offset
- Variable duty cycle
- Output Impedance: 50Ω
- Coarse and fine tuning
- Two-year warranty
- Size: 10.4"W x 11.7"D x 3.4"H • Weight: 6.2 lbs.

BK PRECISION

Part No.	Prod. No.	Description	1	5
160469CP	BK4011A	0.5 to 5MHz	$314.95	$299.95

2MHz & 5MHz Sweep Function Generators with 6-Digit Frequency Counter

- Frequency range: 0.02Hz–2MHz (P/N 94676CP); 0.02Hz–5MHz (P/N 201881CP) in 7 ranges
- Sweep width: 1:1 to 100:1; rate: 20ms to 25s (.5Hz-50Hz)
- Output impedance: 50Ω ±5%
- Frequency counter range: 0.2Hz to 50MHz
- Maximum input voltage: 250Vp-p
- Input voltage: 115/230VAC @ 50-60Hz (switchable)
- Size: 10.3"L x 10.0"W x 3.2"H • Weight: 5.8 lbs.
- One-year warranty

201881CP
EZ DIGITAL

Includes: Probe and detachable power cord

Part No.	Prod. No.	Description	1	5
94676CP	FG7002C	2MHz Func. gen.	$329.95	$296.95
201881CP	FG7005C	5MHz Func. gen.	399.95	359.95

Digital Multimeter Quick Selection Guide

* See indicated page for more details on each product

All measure DC Voltage, AC Voltage, Resistance and Current, except as noted

Handheld Digital Multimeters

Part No.	Best Sellers	Manufacturer No.	* Page #	Display Count	Analog Bargraph	RS-232 PC Interface	Autorange	True RMS	Capacitance	Inductance	Frequency	Temperature	Diode Test	Logic Test	Continuity Test	Transistor hFE Test	Price
27115CP	✔	Metex M3800	141	2000													$35.95
119212CP	✔	JE110	139	2000									✔			✔	19.95
192647CP	✔	Wavetek 10XL	140	2000									✔		✔		49.90
197958CP		Extech MV110	141	2000									✔		✔	✔	38.95
192621CP		Wavetek/MM 15XL	140	2000									✔	✔	✔		59.95
197966CP		Extech MV120	141	2000					✔			✔	✔		✔		68.95
192604CP		Wavetek 23XT	140	2000								✔	✔	✔	✔	✔	59.95
177480CP	✔	AEEC2890	140	2000					✔		✔	✔	✔				49.95
141250CP		BelMerit DX405	140	2000					✔			✔	✔				69.95
155483CP		Metex ME-21	141	2000	✔	✔						✔	✔		✔	✔	59.95
192575CP	✔	Wavetek 25XT	140	2000					✔			✔	✔	✔	✔		89.95
147096CP		BelMerit DX460L	140	2000					✔	✔	✔	✔	✔				99.95
155475CP		Metex ME-22	141	2000	✔	✔						✔	✔	✔	✔	✔	79.95
160813CP		Metex M3640D	141	2000	✔	✔			✔			✔	✔		✔	✔	89.95
155491CP		Metex ME-22T	141	2000	✔	✔		✔				✔	✔	✔	✔	✔	89.95
101936CP		DM333	140	3200	✔		✔						✔		✔		67.95
182035CP		Fluke 73-III	139	3200	✔		✔						✔		✔		148.95
192612CP		Wavetek/MM 35XL	140	3200	✔		✔				✔		✔		✔		64.95
198694CP		Wavetek/MM DM73B	140	3400			(No current)							✔			44.95
192583CP		Wavetek/MM AC40A	142	4000			✔	(No DC current)						✔			74.95
211650CP		Extech MN26	140	4000			✔				✔	✔	✔		✔		39.95
117372CP		Metex M3850D	141	4000	✔	✔	✔		✔		✔	✔	✔		✔	✔	109.95
137461CP	✔	Metex M3860D	141	4000	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	149.95
215589CP		Metex M-3890D	147	3999	✔	✔	✔		✔		✔	✔	✔	✔	✔	✔	99.95
192655CP		Fluke 175	139	6000	✔		✔	✔	✔		✔		✔		✔		168.95
192663CP		Fluke 177	139	6000	✔		✔	✔	✔		✔		✔		✔		193.95
185535CP	✔	Fluke 179	139	6000	✔		✔	✔	✔		✔	✔	✔		✔		208.95
190967CP		Fluke 110	139	6000			✔	✔	✔		✔		✔		✔		98.95
190975CP	✔	Fluke 111	139	6000			✔	✔	✔		✔		✔		✔		128.95
185527CP	✔	Fluke 112	139	6000			✔	✔	✔		✔		✔		✔		148.95
136590CP	✔	Mastech MY65	141	20,000					✔				✔		✔	✔	69.95
144872CP		Metex M4640A	141	20,000	✔	✔			✔			✔		✔		✔	✔	139.95
185199CP		B&K BK5360	140	50,000	✔		✔	✔	✔		✔		✔		✔		79.99
185201CP		B&K BK5380	140	50,000	✔		✔	✔	✔		✔		✔		✔		149.95
162843CP		Fluke 867BE120R	139	30,000				✔	✔				✔	✔	✔		599.95
164312CP		Fluke 89-IV	139	50,000	✔		✔	✔	✔		✔	✔	✔		✔		319.95
182043CP		Fluke 189	139	50,000	✔		✔	✔	✔		✔	✔	✔		✔		398.95

Bench-Type Digital Multimeters

Part No.		Manufacturer No.	* Page #	Display Count	Analog Bargraph	RS-232 PC Interface	Autorange	True RMS	Capacitance	Inductance	Frequency	Temperature	Diode Test	Logic Test	Continuity Test	Transistor hFE Test	Price
132564CP		DM441	142	20,000				✔			✔		✔			✔	219.95
166852CP		Metex MXD4660A	142	20,000	✔	✔		✔			✔	✔	✔	✔	✔	✔	249.95

Fluke 867BE Graphical Multimeter

.5" Digit Height

- 30,000 count
- Resolution: 10µV maximum
- True RMS reading
- **AC/DC voltage:** 300mV – 1000V
- **AC/DC current ranges:** 300µA – 10A
- **Resistance ranges:** 300Ω – 30 MΩ
- **Capacitance ranges:** 1000pf – 1000µf
- **Frequency ranges:** 1KHz – 10MHz   ✱ Refurbished
- Conductance, duty cycle, period, pulse width
- Three-year manufacturer's warranty   • Wt.: 6.5 lbs.

Part No.	Model No.	1	5
162843CP	FLK867BE120R✱	$599.95	$569.95

Fluke 73 Series III 3200-Count Analog/Digital Multimeter

- 3200 count digital display with 31 segment analog bar graph
- Cat II 600V rating with overvoltage protection
- Automatic touch hold
- Default auto range mode
- Resolution: 100µV maximum
- **DC/AC voltage ranges:** 320mV – 600V
- **DC/AC current ranges:** 320mA – 10A
- **Resistance ranges:** 320Ω – 32MΩ
- Diode and continuity test   • Wt.: 2.0 lbs.

Part No.	Model No.	1	5
182035CP	Fluke 73 III	$148.95	$138.95

Fluke 110 Series 6000-Count Digital Multimeters

- Basic DC accuracy of 0.7%
- True RMS reading   • Autoranging
- Min./max./average functions
- CAT III 600V rated   **185527**
- Resolution: 1mV maximum
- **DC/AC voltage ranges:** 6V – 600V
- **Resistance ranges:** 600Ω – 40MΩ
- Also capacitance, frequency and continuity
- Size: 11.8"L x 7.0"W x 3.0"H   • Weight: 1.3 lbs.

185527 (Fluke 112): • Backlight display

Part No.	Model No.	AC current	DC current	1	10
190967CP	Fluke 110	—	—	$98.95	$93.95
190975CP	Fluke 111	10A	6A/10A	128.95	122.95
185527CP	Fluke 112	10A	6A/10A	148.95	141.95

Fluke 175/177/179 6000-Count Digital Multimeters

- Min./max./average functions   True RMS
- Auto hold and manual hold
- IEC 1010 rating Cat IV 600V/ Cat III 1000V
- Resolution: 100µV maximum
- **DC/AC voltage ranges:** 600mV – 1000V
- **DC/AC current ranges:** 60mA – 10A
- **Resistance ranges:** 600Ω – 50MΩ
- Also capacitance and frequency
- Size: 6.3"L x 3.3"W x 9.2"H   • Weight: 1.5 lbs.   **185535**

185535 (Fluke 179): • Temperature: -40 to +400˚C

Part No.	Model No.	DC Accuracy	1	5
192655CP	Fluke 175	0.15%	$168.95	$159.95
192663CP	Fluke 177	0.09%	193.95	184.95
185535CP	Fluke 179	0.09%	208.95	198.49

Fluke 89-IV & 189 50,000-Count Multimeters w/ Data Logging

- Digital and analog bar graph display
- Backlight with 2 brightness levels
- Fast auto range   • AC/DC true RMS
- Resolution: 1µV maximum
- **DC/AC voltage ranges:** 50mV – 1000V
- **DC/AC current ranges:** 500µA – 10A
- Also capacitance, frequency and temperature
- Conductance, diode testing and continuity function capable
- Data logging: 288 intervals stored; 100 readings   • Weight: 2.0 lbs.
- Size: 8.0"L x 3.9"W x 2.0" Thick   **182043**

Part No.	Model No.	Resistance Ranges	1	5
164312CP	Fluke 89-IV	500Ω-500MΩ	$319.95	$299.95
182043CP	Fluke 189	500Ω-30MΩ	398.95	378.95

2000-Count Pocket Multimeter
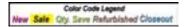
- **DC voltage ranges:** 200mV, 2V, 20V, 200V, 1000V
- **AC voltage ranges:** 200V, 750V
- **DC current ranges:** 200µA, 2mA, 20mA, 200mA, 10A
- **Resistance ranges:** 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ
- Diode and transistor test
- 0.5" digit height
- Removable test leads
- Size: 2.6"W x 1.0"D x 4.8"H
- One-year warranty
- Weight: 0.5 lbs.

Includes: 9V battery

Part No.	Description	1	10	50
119212CP	Pocket multimeter	$19.95	$17.95	$16.19

Color Code Legend | New | **Sale** | Qty. Save | Closeout

2000-Count Multimeter
With Temperature & Frequency Measurement

- 3½-digit LCD (1.0" digit height)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 700V
- **DC/AC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 200MΩ
- **Capacitance ranges:** 2nF – 20µF
- **Frequency**: 20kHz   • Weight: 1.6 lbs.
- **Temperature:** -20˚C – 1000˚C
- Diode, transistor and continuity testing
- Data hold switch   • Size: 4.0"W x 2.0"D x 8.0"H

Incudes: Manual, probes, and 9V battery

Part No.	Mfr. Cross Ref. No.	1	10
177480CP	AEEC2890 .... $49.95		$44.95

Autoranging 3200-Count Multimeter

- 3¾-digit (0.53" digit height) LCD with analog bar graph
- Resolution: 100µV maximum
- **DC voltage ranges:** 320mV – 1000V
- **AC voltage ranges:** 320mV – 750V
- **DC/AC current ranges:** 320µA to 10A
- **Resistance ranges:** 320Ω – 32.59MΩ
- Data hold
- Diode/continuity test   • Auto range   • Auto power off
- Size: 7.7"L x 3.9"W x 1.5"H   • Weight: 1.5 lbs.

Part No.	Mfr. Cross Ref. No.	1	10
101936CP	DM333 .... $67.95		$59.95

Bel**MERIT** 2000-Count Multimeters

- Function and range annunciators
- **DC voltage ranges:** 200mV-1000V
- **DC/AC current ranges:** 200µA-10A
- **Frequency ranges:** 2kHz-20MHz
- **AC voltage ranges:** 200mV-750V
- **Resistance ranges:** 200Ω-20MΩ
- Diode and continuity test
- Auto power off
- Data hold
- Z_{IN} = 10MΩ

141250CP:
- Basic model with transistor
- Capacitance: 2nF-20µF
- Size: 4.0"W x 2.3"D x 8.0"H

147096CP:
- Capacitance: 2nF-2000µF
- Inductance: 20mH-20H
- Size: 4.0"W x 1.5"D x 8.0"H

Includes: Manual, test probes and 9V battery

SALE C€ **141250CP** **147096CP**

Part No.	Description	Wt. (lbs.)	1	10
141250CP	Meter w/transistor	1.5	$69.95	$62.95
147096CP	2000-count multimeter	2.7	99.95	89.95

WAVETEK Meterman — Probe Style Pen Meters
3200 & 4200-Count

SALE

- Unique "Pen" Style DMM that allows easy, one-hand operation
- Auto power off   • Resolution: 0.1mV maximum   • One-year warranty

192591CP: • Probe hold™   • Continuity test

198694CP: • Superior 0.5% accuracy   • Analog bar graph
    • Continuity beeper

Includes: Alligator clip, ground test lead, spare probe tip and batteries

Part No.	Model No.	Resistance Ranges	VDC Ranges	VAC Ranges	Size (LxWxD)	1	10
192591CP	DM73A	420Ω - 4.2MΩ	420mV - 300V	4.2V - 300V	6.7" x 1.3" x 1.0"........	$31.95	$27.95
198694CP	DM73B	340Ω - 34MΩ	340mV - 600V	3.4V - 600V	7.8" x 1.4" x 1.1"..........	44.95	41.49

WAVETEK Meterman — 8-Function Multimeter
2000-Count

- 8 functions/30 ranges
- Resolution: 0.1mV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 2000Ω
- Logic: TTL, up to 20MHz, pulse width >25ns
- Diode test and continuity beeper
- Size: 6.1"L x 2.8"W x 1.3"H   • One-year warranty

Part No.	Model No.	1	10
192621CP	15XL $59.95		$54.95

WAVETEK Meterman — 8-Function Multimeter
3200-Count

- 8 functions/26 ranges
- Digital & analog bar graph display
- Long 1000 hour battery life with auto off for power saving
- Resolution: 0.1mV maximum
- **DC voltage ranges:** 320mV – 600V
- **AC voltage ranges:** 3.2V – 600V
- **DC current ranges:** 320µA – 10A
- **AC current ranges:** 320µA – 10A
- **Resistance ranges:** 320Ω – 32MΩ
- **Capacitance ranges:** 32µF – 32mF
- Diode test and continuity beeper   • Data hold
- Size: 6.1"L x 2.8"W x 1.3"H   • One-year warranty

Part No.	Model No.	1	10
192612CP	35XL $64.95		$58.49

WAVETEK Meterman — 10 & 11-Function Multimeters
2000-Count

- Resolution: 0.1mV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 200µA – 10A
- NPN/PNP transistor, TTL/CMOS logic and diode test   • Data hold
- Continuity beeper
- Size: 7.2"L x 3.1"W x 1.5"H

192604CP: 23XT
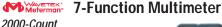
- Unique voltage Safety Tester®
- 10 functions/28 ranges & 4 voltage testers
- **Resistance ranges:** 200Ω – 2000MΩ
- **Temperature:** -20˚ to +750˚C (-4˚ to 1400˚F)

192575CP: 25XT

- 11 functions/32 ranges
- Zero adjust knob   • **Frequency:** 40kHz
- **Resistance ranges:** 200Ω – 20MΩ
- **Capacitance ranges:** 200pF – 20mF

192604CP   **192575CP**

Part No.	Model No.	1	10	25
192604CP	23XT $59.95		$44.99	$31.49
192575CP	25XT 89.95		80.99	72.89

WAVETEK Meterman — 7-Function Multimeter
2000-Count

- Unique voltage Safety Tester™
- 7 function/22 ranges & 6 range volt tester
- Large 17mm (.67") display
- Resolution: 0.1mV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200V – 750V
- **DC current ranges:** 200µA – 10A
- **Resistance ranges:** 200Ω – 20MΩ
- Safety tester: 6, 12, 24, 50, 110 and 220 volts
- Diode test and continuity beeper
- Size: 6.1"L x 2.8"W x 1.3"H   • One-year warranty

Part No.	Model No.	1	10	25
192647CP	10XL $49.90		$47.45	$44.95

4000-Count, 11-Function Multimeter with Autorange

- 4000-count large LCD display
- Auto ranging with manual override
- Resolution: 0.1mV max.
- **AC/DC voltage ranges:** 400mV – 600V
- **AC/DC current ranges:** 400µA – 10A
- **Resistance ranges:** 400Ω – 40MΩ
- **Capacitance ranges:** 4nF - 200µF
- **Frequency ranges:** 10Hz – 10MHz
- **Temperature ranges:** 0˚F - 1400˚F (0˚C - 760˚C)
- Diode test, duty cycle and continuity
- Relative zero, data hold, range hold, auto off
- Size: 2.4"W x 1.6"D x 4.8"H
- Weight: 0.6 lbs.

EXTECH INSTRUMENTS

Includes: Protective holster with stand, two 1.5V AAA batteries and test leads

Part No.	Description	1	10
211650CP	Multimeter $39.95		$37.95

50,000-Count Digital Multimeters with Analog Bar Graph
BK5360 & BK5380

- BK5380 has better accuracy and resolution in some functions
- True RMS reading
- Auto and manual ranging
- Large LCD display provides easy readability, all test parameters in clear view (0.55" digit height)
- AC/DC voltage protection
- Continuity and diode testing
- CE safety approved
- Basic DC accuracy: BK5360 – 0.1%; BK5380 – 0.025%
- **DC voltage:** 500mV to 1000V (10µV to 100mV resolution)

185199CP

BK PRECISION

	BK5360	BK5380
	Ranges/Resolution	Ranges/Resolution
AC Voltage	500mV–750V/100µV–1V	500mV–750V/10µV–100mV
DC Current	5mA–10A/100nA–1mA	500µA–10A/10nA–1mA
AC Current	5mA–1A/1µA–10mA	500µA–10A/10µA–1mA

- **Resistance**: 500Ω – 50MΩ (10mΩ – 1kΩ res.)
- **Capacitance**: 50nF – 50mF (10pF – 10µF res.)
- **Frequency**: 0.6Hz – 500kHz
- **Duty cycle** (BK5360 only)
- Size: 7.5"L x 3.2"W x 1.6"H   • Weight: 1.5 lbs.

Includes: Probes and manual

Part No.	Product No.	1	10	25
185199CP	BK5360 Reg. $209.95	$79.99	$59.99	$41.99
185201CP	BK5380 Reg. $279.95	149.95	112.49	78.75
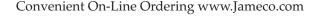
METEX® 2000-Count Multimeter

0.5" Digit Height • LCD Readout

- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 100V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 20µA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- Auto zeroing
- Input impedance: 10MΩ
- Overload protection: 1000VDC/750VAC
- See page 144 for compatible leads (P/Ns: 77745CP, 77770CP, 21856CP, 21864CP)
- Size: 3.5"W x 1.3"D x 6.8"H
- Weight: 1.2 lbs.
- One-year warranty

Includes: Probes, carrying case, manual & 9V battery

Part No.	Product No.	1	10	50
27115CP	M3800	$35.95	$32.49	$29.95

METEX® 2000-Count Multimeter w/ RS-232 and Analog Bar

- 3½-digit LCD (.65" digit height) with analog bar
- Data hold
- Computer interface (RS-232C); DB9M/F cable w/ DOS/Windows® software (3.5" diskette)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- **Frequency ranges:** 2kHz – 2MHz
- Diode, logic test and continuity test
- One-year warranty
- Size: 3.0"W x 1.5"D x 7.2"H   • Weight: 1.8 lbs.

Includes: Manual, probes, 9V battery and software

Part No.	Product No.	1	10	25
155483CP	ME-21	$59.95	$53.95	$44.95

2000-Count Multimeters w/ RS-232, Analog Bar and Temperature

- 3½-digit LCD (.65" digit height) with analog bar
- Data hold
- Computer interface (RS-232C); DB9M/F cable with DOS/Windows® software (3.5" diskette)
- True RMS (P/N 155491CP only)
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- **Frequency ranges:** 2kHz – 20MHz
- **Temperature:** -40˚C to +1200˚C @ 1˚C resolution
- Diode, transistor h_{FE} logic test and continuity test
- Size: 3.0"W x 1.5"D x 7.2"H
- One-year warranty
- Weight: 1.9 lbs.

155475CP

Includes: Operating manual, probes, K-type thermocouple, 9V battery and software

Part No.	Product. No.	1	10	25
155475CP	ME-22	$79.95	$69.95	$62.95
155491CP	ME-22T (true RMS)	89.95	79.95	71.95

2000-Count Multimeter w/ RS-232 & Dual Display

- Dual displays for comparative measurements
- 3½-digit LCD w/ 2000 counts (.65" digit height)
- Auto/min/max/data hold function
- Resolution: 100µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 2000MΩ
- Tests continuity, diode, transistor h_{FE}, frequency, capacitance and temperature
- One-year warranty
- Size: 3.2"W x 1.2"D x 7.1"H   • Weight: 1.8 lbs.

Includes: PC interface cable, probes, temperature probe, manual, software and 9V battery

Part No.	Product No.	1	10	25
160813CP	M3640D	$89.95	$84.95	$79.95

4000-Count Multimeter w/ RS-232, Temperature & Autorange

- 3¾-digit LCD (0.63" digit height)
- Computer interface (RS-232C) w/ software (3.5") and cable
- Resolution: 100µV maximum
- **DC voltage ranges:** 400mV – 1000V
- **AC voltage ranges:** 400mV – 750V
- **DC/AC current ranges:** 400µA – 20A
- **Resistance ranges:** 400Ω – 40MΩ
- **Temperature:** -40˚C to +1200˚C
- Diodes and continuity
- Data hold switch
- Measures transistor h_{FE}, frequency, and capacitance
- Autoranging all scale settings
- One-year warranty
- Size: 3.3"W x 1.8"D x 7.2"H
- Weight: 1.8 lbs.

Includes: Manual, software, RS-232 interface cable, temperature probe and probes

Part No.	Product No.	1	10	25
117372CP	M3850D	$109.95	$99.95	$89.95

4000-Count Multimeter w/ RS-232, Dual Display, Inductance & True RMS

- Dual displays for comparative measurements
- 3¾-digit LCD (0.63" digit height)
- True RMS
- Resolution: 100µV maximum
- **DC voltage ranges:** 400mV - 1000V
- **AC voltage ranges:** 400mV – 750V
- **DC/AC current ranges:** 400µA – 20A
- **Resistance ranges:** 400Ω – 40MΩ
- **Temperature:** -40˚C to +1200˚C; 1˚C resolution   • Weight: 1.9 lbs.
- Measures inductance, capacitance, transistor h_{FE} and frequency
- Computer interface (RS-232C) w/ software & cable
- Autoranging all measurement settings
- Size: 3.3"W x 1.8"D x 7.2"H
- One-year warranty

Includes: 9V battery and software

Part No.	Product No.	1	10
137461CP	M3860D	$149.95	$134.99

20,000-Count Multimeter w/ RS-232 & Multi-Display

- 0.63" digit height   • LCD readout
- Multi-display: 4 simultaneous displays for relative and comparative measurements
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- **Capacitance ranges:** 20nF – 200µF
- **Frequency ranges:** 20kHz – 2MHz
- Diode/continuity: measures forward resistance of a semiconductor junction in kΩ a test current of approximately 1mA
- Measures transistor h_{FE}
- Size: 3.3"W x 1.5"D x 7.5"H   • Weight: 2.0 lbs.
- LCD size: 2.4"W x 1.3"H   • One-year warranty

Includes: Software, test leads, PC interface, manual and 9V battery

Part No.	Product No.	1	10
144872CP	M4640A	$139.95	$125.95

Our Lowest Priced 20,000-Count Multimeter

- Extra-large digits (0.8" digit height)
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 2V - 700V
- **DC/AC current ranges:** 2mA – 10A
- **Resistance ranges:** 200Ω – 200MΩ
- **Capacitance ranges:** 200pF – 20µF
- Measures transistor h_{FE} & continuity
- Hold button   • Auto power off
- Size: 3.9"W x 1.9"D x 8.0"H
- Weight: 1.5 lbs.   • One-year warranty

Includes: Protective boot, 9V battery, probes and manual

Part No.	Product No.	1	10	25
136590CP	MY65	$69.95	$62.95	$56.95

2000-Count Multimeters w/ Adjustable Viewing Angle

- Adjustable 1" LCD display for better angle
- Auto power off
- Improper test lead position alarm alerts user if position does not match function

Tiltable Screen

- Accuracy: ±0.5% for DCV
- Resolution: 100uV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** (P/N 197958CP) 20µA – 10A; (P/N 197966CP) 20mA – 20A
- **Resistance ranges:** 200Ω – 200MΩ
- Tests diode, continuity & transistor h_{FE}
- Size: 3.5"W x 1.3"D x 7.3"H
- Weight: 0.6 lbs.

197958CP

197966CP:
- **Capacitance ranges:** 2nF – 20µF
- **Temperature:** -40˚ to 1000˚C

197966CP

Includes: Test leads, protective holder, 9V battery and temperature probe (P/N 197966CP only)

Part No.	Product No.	1	10	25
197958CP	MV110	$38.95	$34.95	$32.95
197966CP	MV120	68.95	61.95	58.95

Pocket Analog Multimeter

- **DC/AC voltage ranges:** 0 – 500V
- **DC current ranges:** 0 – 250mA
- **Resistance ranges:** 0 – 1kΩ
- **Size:** 2.3"W x 1.2"D x 3.6"H

Includes: Insulated probes

Requires: 1.5V battery (recommend P/N 198707CP, pg 200)

SALE

Part No.	Description	1	10	50
206287CP	Pocket multimeter	$9.95	$8.95	$7.95

Digital LCR Meter

- 3½-digit display (0.5" digit height)
- **Inductance ranges:** 200µH to 200H
- **Capacitance ranges:** 200pf to 2000µf
- **Resistance ranges:** 2mΩ to 20MΩ
- Dissipation factor measurement
- **Size:** 6.7"L x 3.3"W x 1.4"D
- **Weight:** 1.1 lbs.
- One-year warranty

Includes: Test leads and 9V battery

Part No.	Description	1	10	25
127538CP	LCR meter	$139.95	$125.95	$118.95

EXTECH INSTRUMENTS

Passive Component LCR Meter

- Measures L, C, and R with secondary parameter Q, D or R; both are displayed
- Accuracy of 0.7% for L & C, 0.5% for R
- **Inductance ranges:** 2000.0uH to 2000.0H
- **Capacitance ranges:** 2000.0pF to 2000.0uF
- **Resistance ranges:** 20.000Ω to 20.000MΩ
- Test frequencies of 120Hz and 1kHz
- Dissipation Factor (D) (with C) reading: 0 to 0.9999
- Quality (Q) reading: 0 to 9999
- Selectable parallel or series equivalent circuit
- Set HI/LO limits, absolute or percentage
- 4½-digit backlit LCD display
- Bidirectional RS-232 port with optional software
- Max./Min./Avg. recording with auto power off
- **Size:** 7.6"L x 3.6"W x 2.1"H
- **Weight:** 0.8 lbs.

198678CP
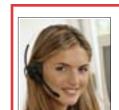
Includes: Test leads, alligator clips, 9V battery and holster

Part No.	Description	1	10
198678CP	LCR Meter	$178.95	$160.95
189237CP	9VDC @ 300mA adapter	4.25	3.45

See the yellow and green highlighted items.

Details on page 4.

Jameco Special Values!

20,000-Count Benchtop Digital Multimeter

True RMS

- 4½-digit display, 5-digit green LCD
- DC accuracy: 0.05%
- Full overload protection
- Resolution: 100µV max.
- **DC voltage ranges:** 200mV - 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 10A
- **Resistance ranges:** 200Ω – 20MΩ
- **Frequency** measurement up to 200kHz
- Continuity check with beeper
- Data hold, diode check, transistor h$_{FE}$ measurement available   • True RMS in AC range
- One-year manufacturer's warranty
- **Size:** 9.9"L x 9.8"W x 3.6"H   • **Weight:** 6.1 lbs.

EZ DIGITAL

Part No.	Product No.	1	10	25
132564CP	DM441	$219.95	$209.95	$199.95

20,000-Count Benchtop Multimeter w/ RS-232, Analog Bar & 4 Displays

- Automatic polarity indicator
- 1-2 readings per second
- DC accuracy: 0.1% +5 digits
- 10 reading storage & compare
- Resolution: 10µV maximum
- **DC voltage ranges:** 200mV – 1000V
- **AC voltage ranges:** 200mV – 750V
- **DC/AC current ranges:** 2mA – 20A
- **Resistance ranges:** 200Ω – 20MΩ
- **Frequency ranges:** 20kHz – 20MHz
- MIN., MAX., AVE., relative functions
- Logic, diode, transistor h$_{FE}$ and continuity test
- **Size:** 11.2"L x 8.2"W x 3.2"H   • **Weight:** 7.5 lbs.

METEX®

Includes: Manual, power cable, probes and software
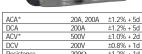
Part No.	Product No.	1	10
166852CP	MXD4660A	$249.95	$224.95

Mini DC/AC Current Clamp Meter/Multimeter

- Bright 1/2" LCD display with DATA HOLD
- 0.5" digit height
- Compatible with P/N 162325CP, pg 142
- **Size:** 7.1"L x 1.9"W x 1.4"H
- **Weight:** 0.9 lbs.
- One-year warranty

ACA*	20A, 200A	±1.2% + 5d
DCA	200A	±1.2% + 5d
ACV*	500V	±1.0% + 2d
DCV	200V	±0.8% + 1d
Resistance	200Ω	±1.2% + 1d
*Frequency Response	40-400Hz	
Zero Adjust	External knob for DCA	

Requires: 9V battery not included (P/N 151095CP, pg 200)

Includes: Test leads, manual and case

Part No.	Description	1	10
115756CP	Mini DC/AC clamp meter	$119.95	$107.95

WAVETEK Meterman ## 5-Function Clamp Meter

- 4000-count display with bar graph
- Resolution: 0.1mV maximum
- **DC/AC voltage range:** 600V
- **AC current range:** 400A
- **Resistance range:** 400Ω
- Continuity test   • Auto off
- 1.0" max conductor size   • Autoranging
- Compatible with P/N 162325CP AC line separator, pg 142
- Data hold   • One-year warranty
- **Size:** 11.4"L x 6.6"W x 2.1"D

Part No.	Model No.	1	10
192583CP	AC40A	$74.95	$67.49

Logic Pulser

- Compatible with TTL, DTL and CMOS ICs
- 1MΩ sync input impedance
- "One shot" or continuous 5Hz train pulse
- Pulse repetition rate: 0.5pps/400pps
- Pulse width output at 100mA load: 10µs
- Pulse mode output current: 10mA
- Square wave current output: 5mA
- **Size:** 7.8"L x 1.0"W x 0.6"H
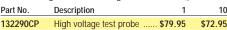
Part No.	Description	1	10	25
24601CP	Logic pulser	$19.95	$17.95	$15.95

High Voltage AC/DC Test Probe

- Maximum voltages: DC: 40kV, AC: 40kV peak, 28kVRMS
- Accuracy: DC: ±1.5%, AC: ±5%
- Meter requires 10MΩ input impedance
- Input/output impedance: 1,000MΩ/1.1MΩ   • Cable length: 39"
- Probe length: 14"   • Weight: 0.8 lbs.

SALE

Part No.	Description	1	10
132290CP	High voltage test probe	$79.95	$72.95

TRIPLETT ## AC Voltage Detector

- Test for the presence of AC voltage on outlets, circuit breakers, extension cords, light switches, power tools and AC motors   • Pocket clip
- Non-contact voltage probe   • AC ranges: 50V–600V
- Visual & audible alerts   • Size: 5.4"L x 0.65"W x 0.60"H

Part No.	Description	1	10
154907CP	AC voltage detector	$17.95	$16.25

AC/DC Circuit Tester

This tester will help you determine if a typical 3-wire outlet is 110V or 220V. Light will glow if neutral and hot lines are probed. A brighter glow will let you know if the outlet is 220V.

- Voltage ranges: 90V – 800V
- Size: (unit) 2.7"L x 0.7"W x 0.5" Thick

Part No.	Description	1	10	50
189309CP	Circuit tester	$.99	$.89	$.79

MASTECH ## 15A AC Line Separator for AC Current Clamp Meters

3-Prong US-Type Plug

- Maximum overload: 250VAC @ 15A
- X1 and X10 clamp areas
- Convenient 0.1"Dia. meter tip test points for neutral/earth/line
- Socket compatible with US & European connectors
- **Size:** 6.0" Lx1.9" W x 1.4"T   • One-year warranty
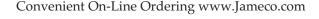
Part No.	Description	1	10	25
162325CP	3-prong separator	$10.95	$9.95	$8.95

50mV/50A Current Shunt

- Current ranges: 0 to 50A
- Accuracy: 0.8% ±0.2mV
- Output ratio: 1mV/1A
- Max. current: 100A   • Size: 5.3"L x 1.2"W x 1.4"H

Part No.	Description	1	10	25
162309CP	Current shunt	$24.95	$22.49	$19.95

EZ DIGITAL
90-Watt Digital & Analog DC Power Supplies

30VDC @ 3A

SALE

- Constant current and constant voltage operation
- Can be used for positive or negative source
- Overload protection circuit
- Input voltage: 100/240VAC @ 50-60Hz
- Size: 5.2"W x 5.6"H x 10.0"D
- Weight: 10.9 lbs. • One-year warranty
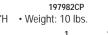
101928CP
Meter Face

121152CP

Part No.	Product No.	Description	1	10
101928CP	GP4303A	Analog DC	$189.95	$169.95
121152CP	GP4303D	Digital DC	199.95	189.95

100-Watt Triple Output Digital and Analog DC Power Supplies

30VDC @ 3A

EXTECH INSTRUMENTS

- Triple output with fixed 5VDC @ 0.5A, 12VDC @ 0.5A
- Adjustable 0 – 30V voltage and 0 – 3A current outputs
- Displays of both voltage and current
- Constant voltage or current
- Current limiting indicator
- Overload and short circuit protection
- Binding post terminals for variable supply
- Input voltage: 110/220VAC @ 50-60Hz (switchable)
- Size: 9.5"L x 6.0"W x 5.6"H • Weight: 10 lbs.

197991CP

197982CP

Part No.	Description	1	10
197991CP	Digital DC	$198.95	$178.95
197982CP	Analog DC	168.95	151.95

MASTECH
100W to 600W Benchtop Power Supplies

- Voltage and current adjustable
- Current restricted and short-circuit protection
- Input voltage: 110/220 ±10% VAC

Analog display power supplies
- Accuracy: 2.5%

Digital display power supplies
- Voltage accuracy: 1% + 2 digits
- Current accuracy: 1.5% + 2 digits

207618CP **207706CP** **211705CP**

Single Output

Part No.	Product No.	Displays	Power (W)	Voltage (VDC)/Current (A)	Size (W"xH"xD")	Wt. (lbs.)	1	10
207618CP	HY3005C	2-Analog	150	30/5	5.4 x 6.2 x 11.5	14	.... $159.95	$144.95
207626CP	HY3010C	2-Analog	300	30/10	14.4 x 6.5 x 10.4	28	...... 299.95	269.95
207693CP	HY5002	2-Digital	100	50/2	5.4 x 6.2 x 11.5	13	...... 199.95	179.95
207706CP	HY5003	2-Digital	150	50/3	5.4 x 6.2 x 11.5	14	...... 249.95	224.95
207600CP	HY5005	2-Digital	250	50/5	14.4 x 6.5 x 11.5	28	...... 299.95	269.95
207634CP	HY3010	2-Digital	300	30/10	14.4 x 6.5 x 10.4	32	...... 399.95	359.95
207685CP	HY3020	2-Digital	600	30/20	14.4 x 6.5 x 10.4	46	...... 499.95	449.95

Multiple Output

Part No.	Product No.	Displays	Power (W)	Voltage (VDC)/Current (A)	Size (W"xH"xD")	Wt. (lbs.)	1	10
211721CP	HY3002-2	2-Digital	120	0-30/2; 0-30/2	18.1 x 10.3 x 14.1	23	.... $249.95	$224.95
211705CP	HY3002D-2	4-Digital	120	0-30/2; 0-30/2	18.1 x 10.2 x 14.2	23	...... 269.95	242.95
211692CP	HY3003D-2	4-Digital	180	0-30/3; 0-30/3	18.1 x 11.4 x 14.2	28	...... 289.95	259.95
211730CP	HY3003-2	2-Digital	180	0-30/3; 0-30/3	18.1 x 11.4 x 14.1	28	...... 299.95	269.95
211713CP	HY3003-3	2-Digital	195	0-30/3; 0-30/3; 5/3	18.1 x 11.4 x 14.1	29	...... 319.95	287.95
211684CP	HY3003D-3	4-Digital	195	0-30/3; 0-30/3; 5/3	18.1 x 11.4 x 14.1	29	...... 329.95	296.95

150-Watt Digital Power Supply

30VDC @ 5A

SALE

- Adjustable voltage/current outputs
- Constant voltage and current operation
- LCD displays for both current and voltage
- Coarse and fine adjustment knobs for current and voltage
- Color-coded terminals for positive, negative and ground connections
- 2A @ 250V fuse
- Dual digital display
- Input voltage: 110/220VAC @ 50-60Hz (switchable)
- One-year warranty
- Size: 5.4"W x 10.7"D x 6.0"H • Weight: 13.8 lbs.

Part No.	Description	1	10	25
153242CP	30VDC @ 5A ...	$219.95	$197.99	$178.19

150-Watt Linear Power Supply

15VDC @ 10A

- Output voltage: 2VDC to 15VDC
- Output current: 15A max.
- Constant voltage and current operation
- Color-coded terminals for positive and negative terminals, voltage adjustment knob
- Overvoltage, overcurrent, short-circuit protection
- Cigarette lighter output current plug
- LED indicator for power and warning
- Current and voltage panel meter
- Built-in fan
- Input voltage: 110VAC @ 60Hz
- Size: 5.7"L x 6.2"W x 4.0"H • Weight: 12.0 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175265CP	DPS150A	$149.95	$134.95	$129.95

150-Watt Power Supply

50VDC @ 3A

- Adjustable voltage/current outputs
- Constant voltage & current operation
- Color-coded terminals for ground, positive and negative terminals
- 3A @ 115V fuse
- Color-coded adjustment knobs for voltage, current and fine adjustment
- Input voltage: 110VAC @ 60Hz
- Color: dark gray
- Size: 9.0"L x 4.75"W x 7.5"H
- Weight: 12.3 lbs. • One-year warranty

Part No.	Description	1	10	25
163723CP	50VDC @ 3A ...	$159.95	$144.95	$137.95

190-Watt Triple Output Power Supply

Digital Display

- Output voltage: 0 to +30VDC @ 3A 0 to -30VDC @ 3A +5VDC @ 2A
- Ripple voltage: less than 3mVp-p
- Volt and current meter: LED display (±1% + 1 digit)
- Overload protection circuit
- Input voltage: 100VAC/230VAC @ 50-60Hz (switchable)
- Weight: 23 lbs. • One-year warranty

EZ DIGITAL

Includes: Manual and spare fuse

Part No.	Product No.	1	5
157518CP	GP4303TP	$549.95	$529.95

225-Watt Analog Power Supply

15VDC @ 15A

- Output voltage: 9VDC to 15VDC
- Output current: 25A max. (22A continuous @ 13.8VDC)
- Constant voltage
- Over-voltage protection @ 16.5V
- Short-circuit protection @ 27.5A
- Color-coded adjustment knob and output terminals for voltage
- Cigarette lighter plug for current output
- Power and fan LED indicator • Built-in fan
- Voltage and current panel meter
- Input voltage: 110VAC/220VAC @ 47-63Hz (switchable)
- Size: 5.6"L x 6.2"W x 4.0"H • Weight: 3.8 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175257CP	SPS250A	$169.95	$152.95	$144.95

250-Watt Analog Power Supply

50VDC @ 5A

- Adjustable voltage/current outputs
- Constant voltage and current operation
- Color-coded adjustment knobs for voltage, current, and fine tuning
- Color-coded terminals for ground, positive, negative
- 5A @ 250V fuse • Isolated ground
- Input voltage: 110VAC @ 50-60Hz
- Color: dark gray
- Size: 4.9"L x 7.7"W x 6.7"H • Weight: 13.8 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
175249CP	DPS5050	$189.95	$179.95	$171.49

Protected Banana Style Multimeter Test Probes

- Threaded/pointed test tip
- Black and red
- 18 AWG wire • 42" long
- 2 per package

Part No.	Description	1	10	25
77737CP	Protected probes	$6.49	$5.85	$5.25

Standard Banana Style Multimeter Test Probes

- Black and red • 18 AWG wire
- 42" long • 2 per package

Part No.	Description	1	10	25
77745CP	Std. banana probes	$6.95	$6.29	$5.65

PROBE MASTER Probe Test Leads

- 23K gold tips
- Silicon wire
- 1000V rated
- Length: 3'3"
- Spring loaded micro tip

174625CP Includes: 8 plunger type tips

212222CP Includes: Screw-on alligator clips, spade lugs and spring hooks

Part No.	Description	1	10	25
174625CP	Micro tip test leads	$34.95	$31.49	$28.95
212222CP	Softie test leads	29.99	26.49	24.99

PROBE MASTER Probe Kits

- Rating: 1000V 10A
- Gold tips and contacts

212231CP: Universal probe kit includes leads with shrouded right angle banana plug, probes, sprung hook probes, alligator clips and spade lugs

212249CP: Electronic deluxe probe kit includes leads with shrouded right angle banana plug, probes, sprung hook probes, alligator clips, spade lugs, extender probes, minigator leads, .025" wire wrap leads, pico hooks and pincer hooks

Part No.	Description	1	10
212231CP	Universal probe kit	$39.99	$37.99
212249CP	Electronic deluxe probe kit ...	79.99	75.99

Pomona® Replacement Probe Test Lead Set

- Set of two PVC 48" long insulated leads (black/red), probe to banana plug
- Fits Fluke, HP, Tektronix, Wavetek DMMs
- Right-angle multimeter connectors

Part No.	Product No.	1	10	25
155951CP	5519A	$12.95	$11.49	$10.49

Breadboard Pin to Breadboard Pin Test Leads

- 4 each red, yellow, blue, black, white
- 5.9" long • 20 AWG wire
- 20 per package

Part No.	Description	1	10	25
77825CP	Breadboard pin leads	$11.99	$10.99	$9.99

Pomona® Basic Electronic DMM Test Lead Kit

Kit Contains 2 Each (Black/Red):

- Test probes with silicone insulated lead
- Slide-on extended tips & alligator clips
- Supplied in a reusable plastic case
- 48" leads
- Fits most equipment with banana jacks

Part No.	Product No.	1	10	25
155942CP	5672A	$22.95	$19.95	$16.39

Universal Test Lead Kit

Includes: 3 ft. black/red cables, 4.5" black/red insulated test probes, 0.8" needle probes, spade terminals, 2 sets of 4 pieces each red/black insulated alligator clips and banana plug

Part No.	Description	1	10	100
168516CP	Universal kit	$8.95	$7.95	$6.95

ŤΡİ Surface Mount Test Clips

Color Coded

- Can access 0.3mm pitch IC leads
- Stackable side by side
- High reliability: gold-plated hook and contact
- High durability: barrel extension is fluorine-resin coated
- Wire length: 3" test clip wires
- Clip/wire color: 2 each black, red, green, yellow, blue and gray

Includes: 3" ground wire with #8 spade terminal

Part No.	Description	1	10
170528CP	SMD nano clips (12)	$189.95	$169.95

Micro Test Clip

- One piece per package

Part No.	Description	1	10	100	1000
153162CP	1.6" micro test clip	$.75	$.59	$.39	$.29

Mini Test Clips

- Two lengths

Includes: One black and one red hooked probe clip

Part No.	Description	1	10	100
114809CP	1.75" mini test clips	$1.89	$1.49	$1.35
114817CP	3.5" mini test clips	1.75	1.55	1.39

Mini-Clip Test Leads

These spring loaded mini-clips hook easily to IC pins for testing.

- Set of five: red, blue, green, black and yellow
- 14"L; clips on both ends
- 26 AWG to 300V CSA/UL approved wire

Part No.	Description	1	10	100	1000
135298CP	Mini test leads	$11.49	$10.39	$9.29	$8.39

Pomona® Minigrabber® Test Clip Patch Cord Kits

- One each of 10 colors: black, brown, red, orange, yellow, green, blue, violet, gray and white
- 24" leads

Part No.	Prod. No.	Description	1	10
156494CP	5523	Patch cord (hook)	$34.95	$31.49
156507CP	5521	SMD cord (jaws)	59.95	53.95

BNC to Clip Test Cables

BNC connectors are designed for signal frequencies into the gigahertz range, making them ideal for communications, video & test equipment.

- Micro-clip or mini-clip • Length: 39"

Part No.	Description	1	10	50	100
11421CP	Micro-clip RG174	$3.99	$3.19	$2.89	$2.59
11463CP	Mini-clip RG174	4.39	3.99	3.59	3.19

Pomona® BNC to Minigrabber® Test Clips

- RG 174/U, .100" O.D.
- Rating: 300 VRMS max., +50˚C (+122˚F) max.
- Strain relief: PVC molded directly to connector
- Length: 36"

Part No.	Prod. No.	Description	1	10
176954CP	5187-K-36	Minigrabber® ...	$21.95	$19.95

Pomona® BNC Male w/ Molded Strain Relief to Minigator® Test Clips

- RG 58C/U, .195" O.D.
- Rating: 45 VRMS max., +50˚C (+122˚F) max.
- Jaws open to .187" max.
- Length: 36"

Part No.	Prod. No.	Description	1	10
176971CP	4532-C-36	BNC/Minigator® ...	$17.95	$15.95

Pomona® BNC Cables

- RG58 C/U 50Ω cable
- BNC male connectors
- Molded strain relief
- Length: P/N 159871CP: 36" P/N 159880CP: 60"

Part No.	Product No.	1	10	25
159871CP	2249-C-36	$15.95	$14.39	$12.95
159880CP	2249-C-60	16.95	14.95	12.95

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back!

Details on page 201.
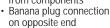
Mini-Clip to Banana Test Cables

- Plunger-type action
- Available in black or red
- Positive connection that won't disconnect from components
- Banana plug connection on opposite end
- Length: 3.5' • 20 AWG insulated wire

21864CP

Part No.	Description	1	10	100
21856CP	Black test cable	$3.95	$3.55	$2.99
21864CP	Red test cable	3.95	3.49	2.99

Pomona® Stackable Banana Test Lead Cables

159898CP *159901CP* *159919CP*

- 5000V @ 15A • 55°C max.

159898CP: Two 36" leads, mini clip w/ banana
- 45VAC @ 5A max.; beryllium copper contact and glass filled insulation

159901CP: Two 24" leads **159919CP:** Two 36" leads
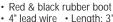
Part No.	Prod. No.	Description	1	10	25
159898CP	3782-36	Mini w/ banana	$7.95	$6.95	$6.25
159901CP	B-24-02	Patch cord	9.95	8.95	7.95
159919CP	B-36-02	Patch cord	9.95	8.95	7.95

Banana to Banana Test Leads

- Stackable
- Color coded; 2 each red, yellow, blue, black, white • 9.8" long
- 10 per package
- 18 AWG wire

Part No.	Description	1	10	25
77841CP	Test leads	$22.95	$20.69	$18.59

Double-Banana Plug to Alligator Clips Test Cable

- Red & black rubber boot
- 4" lead wire • Length: 3'

Part No.	Description	1	10	50	100
107422CP	Test cable	$3.95	$3.49	$2.95	$2.49

Alligator Clip Leads

- 24 AWG wire
- Color-coded, 15" long
- Insulated alligator clip on each end
- 10 per pkg. in assorted colors

Part No.	Description	1	10	100	1000
10444CP	Alligator leads	$3.75	$3.39	$3.05	$2.75

BNC to Alligator Clip Test Cable

Permits BNC assembly to be used as a test cable.

- Upper connection: two alligator clips – red 5.5" 22AWG wire; black 9" 22AWG wire
- Lower connection: 23" RG/58U cable with BNC connector

Part No.	Description	1	10	100	1000
11383CP	BNC cable	$3.49	$2.49	$2.25	$2.05

Pomona® Test Lead Holders
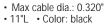
155985CP:
- Max cable dia.: 0.450"
- 11"L • Color: blue

155977CP:
- Max cable dia.: 0.320"
- 11"L • Color: black

155969CP:
- Max cable dia.: 0.210"
- 11"L • Color: orange

155985CP
155977CP

Part No.	Prod. No.	No. of Slots	1	10	25
155985CP	2708B	9	$9.95	$9.45	$8.95
155977CP	4408	10	9.95	9.45	8.95
155969CP	1508	14	9.95	9.45	8.95

Insulated Alligator Clips

- Color-coded
- Insulated barrel
- Jaw opening .375"-0.5"
- Accepts standard banana connector
- Solder strap and pre-drilled hole for 6-32 self threading screw • Size: 2.3"L x 0.5"W

Includes: One red and one black clip

Part No.	Description	1	10	100	1000
70990CP	Alligator clips	$.39	$.36	$.33	$.30

1⁹⁄₁₆" Banana Plugs

- Set-screw connection
- Standard banana spring plug
- Additional 6-32 threaded hole for connection reliability
- .1875" lead opening
- Insulating sleeve is threaded to banana plug body
- Size: 1.6"L x 0.4"Dia.

Includes: One red and one black plug

Part No.	Description	1	10	100	1000
72194CP	Banana plugs ...	$1.59	$1.49	$1.25	$1.09

2¼" Banana Plugs

- Nine rib spring plug
- Will accept up to 0.1" dia. wire
- Set-screw connection
- Each plug equipped with hole for interconnection
- Size: 2.3"L x 0.3"W
- Insulating sleeve fits snugly over copper post

Includes: One red and one black connector

Part No.	Description	1	10	100
137525CP	Banana plugs	$2.95	$2.12	$1.84

Pomona® Solderless Banana Plug Sets

159863CP *159855CP* *159927CP*

- Nickel-plated
- ABS insulation
- Color: 1 red and 1 black per set
- Set screws secure leads
- 5000VDC @ 15A • 50°C max.

159863CP: Solderless with safety collar & set screw
159855CP: Solderless with set screw
159927CP: Solderless double banana plug w/ wire guide

Part No.	Product No.	1	10	25
159863CP	1825-02 set	$2.45	$2.19	$1.95
159855CP	1325-02 set	2.95	2.69	2.39
159927CP	MDP-02 set	4.49	4.05	3.65

Double Banana Plugs

- Dual gold-plated female banana plugs
- Stackable

125217CP

Part No.	Description	1	10	100
125209CP	Blk banana connector	$2.39	$2.15	$1.89
125217CP	Red banana connector	2.39	2.15	1.95

1" Screw-Type Binding Posts
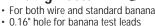
- For both wire and standard banana
- 0.16" hole for banana test leads
- Chassis mount with lock washer and nut
- Solder tab hole: 0.06" diameter
- Size: 1.0"L x 0.5"Dia.

Requires: 0.32" mounting hole

Includes: One red and one black insulated post

Part No.	Description	1	10	100	1000
71239CP	Binding posts (2)	$.99	$.85	$.69	$.59

1¾" Screw/Solder Binding Posts

- For both wire and standard banana
- 0.16" hole for banana test leads
- Solder post: 0.0625" diameter • Chassis mounting
- Size: 1.8"L x 0.5"Dia.

Includes: One red and one black insulated post

Part No.	Description	1	10	100	1000
77690CP	Binding posts (2)	$1.09	$.95	$.79	$.69

Double Binding Posts – Dual Banana

- Red/Black design • Screw-mount
- 0.72" between posts • Size: 1.6"L x 1.4"W

Part No.	Description	1	10	100
125196CP	Screw mount bind post	$3.95	$3.45	$3.19

Single Binding Post to BNC Male

- Binding post with captive thumb nut
- Accepts standard banana plugs
- Operating voltage: 500 VRMS
- Brass nickel plated

100600CP

Part No.	Description	1	10	100
100600CP	Red binding post	$1.49	$1.19	$.95
100618CP	Black binding post	1.49	1.19	.95

BNC to Double Binding Posts – Dual Banana

- Red/Black design

125233CP

Part No.	Description	1	10	100
125233CP	BNC-female	$4.49	$3.99	$3.55
99354CP	BNC-male	4.49	3.99	3.55

BNC to Standard Double Banana Plugs

11439CP *125225CP*

Permits BNC cables to be used with equipment having banana jacks. Lower connection: BNC; upper connection: double banana plug on .750" centers. Cross holes .166" diameter in body provide side stack-up connections.

Part No.	Description	1	10	100
11439CP	BNC banana plug (F)	$4.49	$4.05	$3.65
125225CP	BNC banana plug (M)	4.95	4.39	3.69

Network Cable Tester/Locator

BelMERIT	Range:
50Ω/75Ω Coax	4' to 984'
100Ω twisted pair:	
with RJ45	4' to 328'
with alligator clips	4' to 984'

- Detects opens, shorts, and cable distance
- Measures distance to the open or short
- Tests 50Ω & 75Ω coaxial cable and 100Ω UTP shielded or unshielded cable
- Distance res.: 1 ft.
- Accuracy: open ±(7% +4 ft.); short ±(10% +4 ft.)
- Size: 7.0"L x 2.8"W x 1.2"H
- Weight: 1.5 lbs.
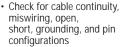
Includes: Manual, alligator clip to BNC adapter (7"L), carrying case and 4 AA alkaline batteries
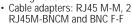
Part No.	Description	1	10
171352CP	Network cable tester	$169.95	$152.95

Modular Cable Tester with Remote Terminator

Easily read correct pin configuration of 10baseT, 10base2, RJ45/RJ11 modular cables, 258A, TIA568A/568B, token ring, etc. Test installed cables either on wall plate or patch panel from a distance.

- Check for cable continuity, miswiring, open, short, grounding, and pin configurations
- Cable adapters: RJ45 M-M, 2 RJ45M-BNCM and BNC F-F
- On-board connectors: 2 RJ45F (tester) and 1 RJ45F (remote)
- Size: 4.0"L x 2.5"W x 1.0"H (Main console)
- Size: 4.0"L x 1.3"W x 1.0"H (Remote)
- Weight: 0.7 lbs. • One-year warranty

CE

Includes: Manual and test cables

Part No.	Description	1	10
145710CP	Modular cable tester	$84.95	$76.49

EXTECH INSTRUMENTS — Tone Generator and Amplifier Probe

For Tracing Wires & Cables

- Tests wire trace, continuity, clear/busy/ringing line, tip/ring identification
- Insulated inductive probe tip prevents shorting conductors
- Selectable continuous or variable tone generation
- Built-in speaker on probe with sensitivity control • Output jacks for both headphones and handsets
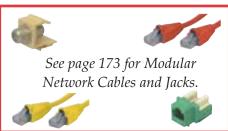
Includes: Alligator test leads, modular phone connector cables, 9V battery, and carrying pouch

Part No.	Description	1	10
198002CP	Tone generator and amplifier probe	$79.95	$71.95

PC Cable-Check™ Tester

Tests standard computer cables for open, shorted and cross-connected wires. PC Cable-Check™ also tests any combination of D-sub 9-pin, D-sub 15-pin, D-sub 25-pin, Centronics 36-pin printer, plus RJ11, and RJ45 telephone plugs. A separate section to check USB-A to USB-B cables, as well a separate section to check female BNC to female BNC cables.

Includes: Battery and manual

Part No.	Description	1	10
123916CP	PC cable-check™	$159.95	$149.95

UTP Ethernet Cable Tester

- Connector type: RJ45 8P8C
- System used: 258A, 356A, AT&T/Ethernet 10BaseT
- Miswire, open, short tests
- Size 4.5"L x 2.5"W x 1.3"H

Requires: 9V battery (recommend P/N 151095CP, pg 200)

Includes: Zipper case

Part No.	Description	1	10
115895CP	Network Cat. 5 tester	$29.95	$26.95

TRIPLETT Wire Tracing Test Set
LAN "Fox" Generator and "Hound 2" Probe

Fox features:
- Generates 3 distinct tones usable for wire tracing
- LED indicator for continuity
- Line powered in tone mode
- Supplies talk power to a handset or telephone
- Size: 3.6"L x 2.4"W x 1.0"H
- Tone output level: +3dBm, 600Ω
- Max. continuity/talk current: 35mA (shorted leads)

Hound 2 Probe features:
- Streamlined case design • Adjustable volume control
- LED indicator intensifies as signal gets stronger
- Hi-gain & hi-impedance amp • Mylar cone speaker
- Size: 7.2"L x 1.4"W (barrel) x 1.9"Dia. (speaker)

Requires: 9V battery (recommend P/N 151095CP, pg 200)

Part No.	Description	1	10
155133CP	Wire tracing set	$68.99	$64.99

RS-232 Mini-Tester with Status LEDs

Tests any RS-232 (DB25) interface and helps to identify equipment that has failed. Seven bicolor LEDs indicate the status of TD, RD, RTS, CTS, DSR, CD and DTR. LEDs indicate positive (red) and negative (green). No extra power is required. Connectors: male to female DB25.

Part No.	Description	1	10	100
26729CP	Mini-tester	$10.95	$9.95	$8.95

Miniature RS-232 Breakout Box for Quick Design Changes

Design new interfaces or modify old ones quickly and easily. Completely self-contained. Connectors: male to female DB25.

Includes: 25 each 22 AWG wire jumpers and machine tool sockets

Part No.	Description	1	10	100
11181CP	Breakout box	$8.95	$7.95	$6.95

RS-232 Loopback Tester

The tester acts as a data verifier by sending data back to the transmission device. Used for diagnostic testing of RS-232 circuits. 4 LEDs monitor lines 2 to 3, 4 to 5, 6 to 20, and 15 to 17. Connectors: male to female DB25.

Part No.	Description	1	10	100
22728CP	Loopback tester	$6.95	$5.25	$3.65

RS-232 Line Status Tester
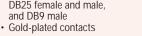
Identifies simple interface problems which you can repair yourself. Targets the status of lines 2, 3, 4, 5, 6, 8, 11, 19, and 20. Connectors: male to female DB25.

SALE

Part No.	Description	1	10	100
14285CP	Check line tester	$7.95	$6.49	$5.95

RS-232 Signal Adapter/Splitter

- Metal connectors: DB25 female and male, and DB9 male
- Gold-plated contacts

Part No.	Description	1	10	100
105195CP	Tri-port serial adapter	$7.95	$6.95	$5.95

Flexible Multilink RS-232 Tester & Breakout Box

Visually indicates the status of lines 2, 3, 4, 5, 6, 8, 20, and 22 on the DTE and DCE sides. Provides signal status at a glance. Complete cable "breakout" & reconfiguration. Connectors: DB25 male & DB25 female.

- Cable length: 4" • Size: 3.5"L x 3.3"W x 1.0"H

Includes: handy carrying case, 10 jumper wires and a device wiring chart

Part No.	Description	1	10	25
25945CP	Tester/breakout box	$22.95	$19.95	$17.95

Time, Temperature and Environmental Meters

For more temperature and environmental meters see pages 2, 3, 209 & 212.

Temperature/Humidity Meter with Clock & Min/Max Memory

- Large bright LCD displays for temperature, humidity, and time
- Temperature range: 14˚F to 140˚F (-10˚C to 60˚C)
- Humidity range: 10 to 85%
- Clock function displays 12 hour time with AM/PM indication or 24 hour time
- Min./Max. memory function with reset for temperature and humidity
- Size: 4.3"L x 2.8"W x 0.8"Thick

Includes: Built-in tilt stand, AAA battery and wall mounting bracket

Part No.	Description	1	10	25
198053CP	Temp/humidity meter	$28.95	$25.95	$24.49

Indoor/Outdoor Temperature Alarm

- Large 1.5" LCD display
- Displays indoor/outdoor temp. from -58˚ to 158˚F
- Single point alarm (external sensor): set alarm when temperature is above Hi-set or below low set point
- Dual point alarm (external sensor): set alarm when temperature is either outside of or within two set points
- Accurate to 1.8˚F with 0.1˚F resolution
- Audible alarm and red/green LED indicators
- Size: 2.75"L x 2.75"W

Includes: 10 ft. weatherproof outdoor sensor, built-in stand, AAA battery and hardware

Part No.	Description	1	10	25
198037CP	Temperature alarm	$18.95	$16.95	$15.95

Temperature/Humidity Meter with Min/Max Memory

- Displays (%) relative humidity and temperature (˚C/˚F) simultaneously
- Min./Max. memory on both relative humidity & temperature with reset function
- Temperature range: 14˚F to 140˚F (-10˚C to 60˚C);
- Humidity range: 10% to 99%
- 1" high readout
- Size: 4.3"L x 3.9"W x 0.8"Thick

Includes: Built-in tilt stand, AAA battery, and wall mounting bracket

Part No.	Description	1	10	25
198045CP	Temp./humidity meter	$38.95	$34.95	$32.95

Digital Light Meter

- Measures in Lux and footcandle ranges
- Range: Lux – 0 - 50,000 Lux (3 ranges); footcandle – 0 - 5,000 Fc (3 ranges)
- Analog output connectors for external recording
- Separate light sensor for optimum location sampling
- 0.5" digit height
- Dimensions (sensor probe): 3.2"L x 2.2"W x 0.5"H
- Weight: 0.9 lbs. • One-year warranty

Part No.	Description	1	10
131764CP	Digital light meter	$99.95	$89.95

Non-Contact Infrared Thermometer

Non-contact thermometer with laser pointer measures up to 600˚F (320°C)

- Temperature range: 0˚F to 600˚F (-20˚C to 320˚C)
- Basic accuracy: ±2%
- Built-in laser pointer improves aim and accuracy
- Field of view: 6:1 (6" distance measures 1" target)
- 2000-count backlit LCD display
- Audible and visible over range indicators • Backlit display
- Automatic data hold and power off
- Fixed emissivity covers 90% of surface application
- Size: 8.3"L x 3.5"W x 1.5"D
- Weight: 0.4 lbs.

Includes: 9V battery

Part No.	Description	1	10
211588CP	Non-contact thermometer	$88.95	$84.50

Humidity/Temperature Pen Meter and Pen Meter Kit

169797

Compact, digital Hygro-thermometer ideal for field use.

- 2000-count LCD display
- Simultaneous display of temperature and relative humidity
- Capacitance-type sensor
- Max/min and data hold
- Max. resolution: 1% humidity, 1˚ temperature
- Humidity range: 10% to 90%
- Temperature range: 32˚F to 112˚F (0˚C to 50˚C)
- Basic accuracy: ±5%, ±1.5˚
- Size: 5.7"L x 1.2"W x 1.0"Thick

169797CP Includes: Pocket clip, 3V lithium battery, 33% and 75% RH calibration standards (calibration bottles), and carrying case

211609CP Includes: Pocket clip, 3V lithium battery and carrying case

Part No.	Description	1	10
169797CP	Humidity/temp pen meter kit	$98.95	$94.25
211609CP	Humidity/temp pen meter	54.95	52.25

Analog Wall Clock with Humidity and Temperature

- Matte silver finish with black faceplate and easy to read dials
- 9.75" diameter wall clock with second hand maintains ±30 seconds/month accuracy
- Displays temperature of -40˚F to 120˚F (-40˚C to 50˚C)
- Relative humidity dial displays 0% to 100% RH with basic accuracy of ±3%
- Weight: 1.0 lb.

Includes: 1.5V AA battery

Part No.	Description	1	10
211625CP	Analog wall clock	$28.95	$27.45

3999-Count Multimeter with Triple Display, USB Interface and Temperature

- 3¾ digit LCD display with triple display (main/sub1/sub2) and analog bar (0.76″ digit height)
- Dual display readout for temperature in °C and °F
- Data hold, memory, relative offset, recall, range, minimum/maximum hold functions
- Auto power off • Auto ranging
- Computer interface: (USB) USB-A male to USB-B male cable with Windows® 98/ME/2000 software (3.5" diskette)
- **DC voltage ranges**: 400mV – 1000V
- **AC voltage ranges**: 4V – 750V
- **DC current ranges**: 400µA – 20A
- **AC current ranges**: 400µA – 20A
- **Resistance ranges**: 400Ω – 40MΩ
- **Capacitance ranges**: 4nF – 200µF
- **Frequency ranges**: 4kHz – 4MHz
- **Temperature**: -40°F to 2192°F (-40°C to 1200°C)
- Diode, continuity, transistor hFE, and logic test
- Size: 3.5"W x 1.7"D x 7.8"H • Weight: 1.6 lbs.

Includes: Manual, probes, K-type thermocouple, USB-A male to USB-B male cable, software, and 9V battery

Part No.	Product No.	1	10
215589CP	M-3890D	$99.95	$94.99

LCD Stopwatch with Alarm and Calendar

- Water resistant housing, complete with 39" neck strap and battery
- Large LCD display
- Accurately times a two-person competition
- Displays accumulated elapsed time and split-time measurements
- Timing capacity of 23 hours, 59 minutes, and 59 seconds
- 12/24 hour clock operation with settable hour chime, wake and snooze alarm
- Accurate to ±3 seconds/day
- Size: 2.3"W x 2.8"H x 0.5"Thick

Part No.	Description	1	10
154739CP	Stopwatch w/ Alarm	$18.95	$17.95

Digital Stopwatch/Up-Down Timer/Alarm/Calendar

- Water resistant housing, lithium battery, and 39" (1m) neckstrap
- Large display provides timing to 1/100th of a second
- Timing capacity: 9 hours, 59 minutes, 59.99 seconds
- Accurate to ±5 seconds/day
- Built-in memory recalls up to 10 laps
- Clock function (12/24hr) features programmable alarm with hourly chime
- Built-in calendar displays day, month, and date
- Countdown timer function features input ranges from one minute to 9 hours, 59 minutes

Part No.	Description	1	10	25
198029CP	Stopwatch/timer	$28.95	$25.95	$24.49

Super Bright, Super Reliable LED Flashlight

The perfect tool for individuals who really depend upon a flashlight that always works. Containing space age solid-state circuitry, batteries last 14 times longer than for conventional flashlights and can function continuously up to one month. It's super bright white LEDs will last at least 11 years.

- Waterproof, designed for all weather conditions
- Shockproof, withstands a drop from 4'
- Low cost per hour of operation
- Industrial grade switch, rated for 10,000 operations
- Rubber over-molding

215677CP: One month continuous operation using three ("D" cell batteries P/N 196998CP, pg 200)
215685CP: 25-days continuous operation using three ("C" cell batteries P/N 197000CP, pg 200)
215693CP: 14-days continuous operation using three ("AA" cell batteries P/N 185261CP, pg 200)

Part No.	Prod. No.	LEDs	Length	1	10
215677CP	LW-4000	10	10.6"	$59.95	53.95
215685CP	LW-3000	7	8.9"	49.95	45.95
215693CP	LW-2100	4	7.9"	34.95	31.49

4-Piece Steel Tweezer Set

- 4 styles of stainless steel tweezers, one self-locking
- Ideal for picking up small components in hard-to-reach places

Part No.	Description	1	10	50
10735CP	4-piece tweezer set	$7.95	$6.95	$5.95

4-Way Master Key Chuck Tool

- Opens a variety of chucks (P/N 172911 opens 86 types); (P/N 172929 opens 127 types)
- Opens most chucks from manufacturers such as Cooper, Milwaukee, Craftsman, Black and Decker, and Rohm

172911CP: • Chuck size: 1/4" to 3/8" • Wt.: 0.3 lbs.
172929CP: • Chuck size: 1/2" to 3/4" • Wt.: 0.6 lbs.

Part No.	Description	1	10	25
172911CP	Opens 86 chucks	$10.95	$9.85	$8.89
172929CP	Opens 127 chucks	11.95	10.75	9.69

Automatic Center Punch Tool

Adjustable
- Precision instrument
- Alloy steel point
- Knurled steel body • Size: 5.0"L x 0.5"Dia.
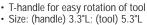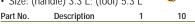
Part No.	Description	1	10	50
160282CP	Center punch tool	$5.95	$5.39	$4.85
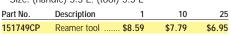
T-Handle Reamer Tool

Excellent for aluminum chassis work
- For enlarging starter holes on panel mount components from 1/8" to 1/2" diameter
- T-handle for easy rotation of tool
- Size: (handle) 3.3"L; (tool) 5.3"L

SALE

Part No.	Description	1	10	25
151749CP	Reamer tool	$8.59	$7.79	$6.95

Magnetic Tip Measuring Tape

Measuring height or width with a regular tape measure is not easy, especially if you are working single-handed with metal materials. End hooks will always slide out or will not hook properly. With this measuring tape, you can easily clamp on to metal surfaces with its magnetic hook and make precise height or width measurements.
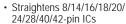
- Magnetic end hook for convenient measuring and TRU ZERO function
- Blade with nylon coating for easy scale reading
- Anti slip and shockproof rubber case
- Heavy duty spring and blade system
- Tape measure length: 25'

Part No.	Description	1	10
215415CP	Magnetic tip tape measure	$13.85	$12.59

IC Pin Straightener

Straighten bent pins safely and easily with Jameco's IC pin straightener.

- Straightens 8/14/16/18/20/24/28/40/42-pin ICs
- Materials: black plastic • Size: 3.3"L x 1.5"W x 0.4"H

Includes: Ground terminal

Part No.	Description	1	10	100
99362CP	IC straightener	$7.35	$6.35	$5.75

2-Piece Electronic Inspection Set

- Bent mirror tool (0.1"Dia. x 6.8"L) – for visual inspection
- Sharp metal pick (0.1"Dia. x 6.0"L) – great for PCB re-work

SALE

Part No.	Description	1	10	25
72514CP	Electronic inspection	$2.49	$2.19	$1.99

Trimmer Potentiometer Adjustment Pocket Tool

- Glass filled body
- Stainless steel blade
- Size: 5.2"L

Part No.	Description	1	10	100
153314CP	Trimmer tool	$1.19	$.99	$.89

Crimp Pin Extraction Tools

- Easily extract 0.093" locking pins from connectors
- Heavy duty metal
- Precision design
- Length: 5"

131887CP

Part No.	Prod. No.	Description	1	10
131887CP	HT319C	Male tool for 42729CP	$9.95	$8.95
131879CP	HT319B	Female tool for 42649CP	9.95	8.95

D-Sub Pin Insertion/Extraction Tool

- Insertion/extraction tool: red/white plastic body; exchangeable tips

Part No.	Description	1	10	100
19094CP	Tool	$3.49	$2.99	$2.59

6-Step Drill Tool

3/16" to 1/2"
Drill multiple holes in thin material with the same bit, faster and easier. Each bit does the work of many drill bit sizes. You can drill holes in most materials such as plastic, metal, and wood up to 1/8" thick. No center punching on most sizes. Made of high-speed steel.
- Drill size: 3/16" to 1/2"

Part No.	Description	1	10	25
172401CP	Step drill	$9.95	$8.95	$7.95

Mini-Drill and Stand

This Mini Drill is excellent for drilling through circuit boards and protoboards. The drill comes with an array of drilling, grinding and sanding attachments. Drill stand is designed to function like a drill press.

Shown w/ drill (26702CP) & stand (26711CP)

Part No.	Description	Wt. (lbs.)	1	10	25
26702CP	MS398 drill	0.8	$29.95	$26.95	$23.95
26711CP	MS399 stand	1.8	19.95	17.95	15.95

9-Piece Assorted Drill Bit Kit
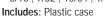
- Variety of sizes: .014" to .126"
- Each kit will vary in contents of bit sizes
- Shank diameter: .125"

Includes: Plastic case

Part No.	Description	1	10	50
131676CP	9-piece drill bit kit	$9.95	$8.95	$7.95

13-Piece Drill Bit Kit

- Sizes: 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 11/64", 3/16", 7/32", 15/64", 1/4"

SALE

Includes: Plastic case

Part No.	Description	1	10
202850CP	13-piece drill bit kit	$5.95	$5.35

PC Board Drill Bits

- Reconditioned carbon steel bits
- High quality long lasting cutting edge
- Use for drilling holes in glass PC boards
- Shank diameter: .125"

Part No.	Drill Dia.	No.	Application	1	10	100
16619CP	.021"	75	Miscellaneous	$1.69	$1.49	$1.35
16580CP	.040"	59	Plated thru holes	1.95	1.75	1.59

Strip-Wrap-Unwrap Tools

- Tool tip made of tempered steel
- Use with 30 AWG wire on .025" square posts
- No solder necessary, see pg 117 for wire
- Spring steel cutter • 4.5" long

34577CP

34585CP:
- Wrap 1 to 2 turns of insulated portion of wire for secure connections • Modified tool

Part No.	Product No.	1	10	25
34577CP	WSU30	$29.95	$26.95	$23.95
34585CP	WSU30M	29.95	26.95	23.95

JAMECO

8-Piece Fold-Up TORX Key Set
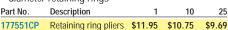
- 3.7" long handle
- TORX bits: T9, T10, T15, T20, T25, T27, T30, T40
- Size: 3.7"L x 1.2"W

SALE

Part No.	Description	1	10	100
176006CP	TORX key set	$9.95	$8.95	$7.95

Retaining Ring Pliers

Internal/External

- Hi-carbon tempered steel
- Black oxide finish
- Vinyl grip
- Length: 6"
- For 0.47" to 0.98" diameter retaining rings

SALE

Part No.	Description	1	10	25
177551CP	Retaining ring pliers	$11.95	$10.75	$9.69

Groove Joint Pliers

- Drop forged steel
- Heat treated
- Milled jaws
- Vinyl grips
- Polished head
- Length: 10"
- Weight: 0.9 lbs.

SALE

Part No.	Description	1	10	50
177578CP	Groove pliers	$7.95	$6.95	$5.95

Linesman Pliers

- Drop forged steel
- Heat treated
- Milled jaws
- Vinyl grips
- Polished head
- Length: 8"
- Weight: 0.9 lbs.

Part No.	Description	1	10	50	100
177594CP	Linesman pliers	$6.95	$6.25	$5.59	$4.95

Half-Round Long Nose Pliers

- Drop forged steel
- Heat treated
- Spring return action
- Vinyl grips
- Length: 4.5"
- Knurled jaws

Part No.	Description	1	10	50	100
177607CP	Half-round pliers	$4.95	$4.49	$3.95	$3.59

Steel File Sets

- Strong tool steel

100360CP: 8-piece
- 5.65"L
- 1 ea. 0.15"Dia., 0.13"Dia., 0.12"Dia., 0.11"Dia. and four 0.22"Dia.

202833CP: 6-piece
- 5.5"L
- 1 ea. 0.12"Dia. (round), 0.11"W (triangle), 0.10"W (square), 0.20"W (half-round) and two 0.2"W (flat)

100360CP

Part Number	Mfr Cross Ref. No.	Description	1	10
100360CP	FS108F	8-piece file set	$9.95	$8.95
202833CP	08110	6-piece file set	6.95	4.89

Cordless Screwdriver

- Adjustable handle can be used folded or unfolded
- Thumb switch for reverse and forward action
- No load speed: 180rpm
- Clutch operating torque from 4 to 21kg/cm
- 3.6V rechargeable battery
- Size: 10.5"L x 1.5" Dia.
- Weight: 1.6 lbs.

Includes: 6VDC @ 300mA power supply and screwdriver bits (slotted and Phillips)

Part No.	Description	1	10
176680CP	Screwdriver	$39.95	$35.95

3-In-1 Tool
Measuring Tape, Knife, and Saw

Cut through drywalls, wood, PVC plastic, and paper. This 3-in-1 tool has a serrated saw on one side, a straight edge blade on the other and a detachable 6' measuring tape.
- Length: 8.4"

Part No.	Description	1	10
218641CP	3-in-1 tool	$4.95	$4.49

1/4 – 1/2 Watt Resistor
Lead Forming Tool

- Watt size indicates appropriate package size
- Bends lead length in .05" increments
- Excellent for capacitors also
- 1/4W: 0.4"-1.5"; 1/2W: 0.5"-1.5"; 5.4"L x 1.5"W

Part No.	Description	1	10	50
106884CP	1/4-1/2W	$2.95	$2.65	$2.39

5" Steel Hemostats

- Grade 410 A.I.S.I. stainless steel
- Three locking positions
- Available with straight or curved tip

115107CP

Part Number	Mfr. Cross Ref. No.	Description	1	10	50
115107CP	HEMO1	5" straight	$3.95	$3.49	$2.95
115115CP	HEMO2	5" curved	4.25	3.75	3.25

Deluxe Precision Knife Set

- Three different knife handles – fine work, medium and heavy duty power grip
- Size: 6.3"L x 2.8"W x 1.4"H

Includes: 13 different types of blades

Part No.	Description	1	10	25
72768CP	13 blade knife set	$9.95	$8.95	$7.95

Glue Gun and Sticks

- Adheres to PCBs, cardboard, wires and metal
- Silicon nozzle
- Electronic heating
- Trigger action
- Utilizes long gluesticks (100mm)
- Size: 7.3"L x 6.3"W
- Weight: 0.8 lbs.

72696CP

Part No.	Description	1	10	25
72696CP	Glue gun	$10.95	$9.95	$8.95
78633CP	Glue sticks (6/pk)	2.95	2.69	2.29
176292CP	Glue sticks (10/pk)	4.95	4.29	3.79

6-Piece Electronic
Screwdriver Set

- Three slotted: 0.09"Dia. x 6.6"L 0.12"Dia. x 6.6"L 0.16"Dia. x 9.6"L
- Three Phillips: No.0, 0.12"Dia. x 6.64"L; No.1, 0.16"Dia. x 9.61"L; No.2, 0.09"Dia. x 6.65"L

Part No.	Description	1	10	50
99451CP	6-pc. screwdriver set	$7.95	$6.95	$6.25

6-Piece Screwdriver & Pliers Set

- One micro cutting nipper
- One micro flat nose pliers
- Two slotted: 0.12"Dia. x 9.61"L; 0.09"Dia. x 7.64"L
- Two Phillips: No.0, 0.12"Dia. x 9.61"L; No.2, 0.09"Dia. x 7.64"L

Part No.	Description	1	10	50
99565CP	Screwdriver/plier	$14.95	$13.49	$11.95

6-Piece Precision
Screwdriver Sets

34041CP includes: 3/64", 1/16", 5/64", 5/32", 1/8" and 9/64" slotted screwdrivers
34059CP includes: 3/64"#0, 1/16"#0, 5/64"#0, 3/32"#0, 1/8"#1 and 9/64"#1 Phillips screwdrivers

34041CP

Part No.	Description	1	10	50
34041CP	Slotted screwdriver set	$3.95	$3.49	$2.95
34059CP	Phillips screwdriver set	3.95	3.49	2.95

JAMECO® Pocket Screwdriver

Phillips/Flat head

- Pocket screwdriver with Phillips and slotted
- Pen clip for pocket storage
- Size: 6"L

Part No.	Description	1	10	100
127271CP	Pocket screwdriver	$1.55	$1.45	$1.19

5.3" Flat and Half-Round
Long Nose Pliers

- Stainless steel
- Spring return
- Durable rubber handles
- 5.3" length w/ 1.4" plier nose
- **35473CP/35490CP:** Knurl jaws
- **195531CP:** Smooth jaws

35473CP

Part No.	Description	1	10	50	100
35473CP	Flat long nose	$5.49	$4.99	$4.49	$3.49
195531CP	Flat long nose	4.95	4.49	3.95	3.49
35490CP	Half round	4.95	4.49	3.95	3.49

Xcelite Shearcutter/Plier Tool Set

- Improved handle grip for control and comfort
- Non-glare black finish carbon steel
- Size (plier): 5.6"L
- Size (shearcutter): 5.2"L

Part No.	Description	1	10	25
152055CP	Cutter/plier set (S2K)	$15.95	$14.95	$13.95

Color Code Legend
New Sale Qty. Save Closeout

4" Diagonal Wire Cutter

- Drop forged steel
- Heat treated
- Vinyl grips
- Spring return action
- Polished head
- Length: 4"

Part No.	Description	1	10	50	100
179901CP	Wire cutter	$4.95	$4.49	$3.95	$3.59

4.3" Diagonal Wire Cutter

- Cuts component wire up to 1.2mm thick
- Stainless steel
- Durable rubber handles
- Jaws are designed for flush cutting
- 4.3"L x 2.1"W with 0.5" cutting blade
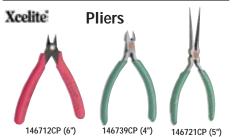
Part No.	Description	1	10	50	100
35481CP	Wire cutter	$5.59	$4.99	$4.55	$3.99

5" Diagonal Wire Cutter

- Cuts component wire up to 1.2mm thick and 0.08mm fine wire
- Insulated handles
- Jaws are designed for flush cutting
- 5.0"L x 1.8"W with 0.5" cutting blade

Part No.	Mfr. Cross Ref. No.	1	10	25
161411CP	Wire cutter	$6.95	$6.25	$5.59

Xcelite Pliers

146712CP (6") 146739CP (4") 146721CP (5")

- Spring returns

146712CP: Micro series wire cutter – flush; 6"
146739CP: Diag. wire cutter – semi-flush; 4"
146721CP: Long needle nose – flat; 5"

Part No.	Product No.	1	10	50	100
146712CP	170M	$5.95	$5.35	$4.79	$4.29
146739CP	MS54V	13.95	12.95	11.95	10.95
146721CP	MN7776V ...	16.95	15.95	14.95	13.95

Automatic Wire Strippers

175097CP:
Strips 8-22 AWG wires
- Spring load grip
- Size: 7.0"L x 2.5"W
- Weight: 0.8 lbs.

Includes: Wire stopper for desired strip length

202841CP:
Strips wires from 2mm - 60mm length
- Size: 6.5"L x 3.0"W
- Weight: 0.3 lbs.

175097CP   202841CP

Part No.	Description	1	10	25
175097CP	Auto wire stripper	$15.95	$14.39	$12.95
202841CP	Auto wire stripper	12.45	11.19	9.95

30-Day Money-Back Guarantee

Precision 5-Piece Stainless Steel Plier Set

- Spring return
- Insulated handles

Includes: One 3.5"L micro cutting nippers and one each 4"L micro round nose pliers, long nose pliers, flat nose pliers and bent nose pliers

Part No.	Description	Wt. (lbs.)	1	10	25
73120CP	5-piece set	0.6 ...	$16.95	$14.95	$13.49

6.6" Wire Cutter/Stripper

24 AWG Stripper

- Strips and cuts wire as small as 24 AWG
- Insulated grips
- Spring loaded for easy use
- Cutter angled @ 45 degrees for use in tight places
- Size: 6.6"L x 3.0"W

Part No.	Product No.	1	10	50	100
159273CP	HT1091	$4.95	$4.49	$3.95	$3.59

6" Premium T5 & T6 Wire Strippers

- Contoured cushion-grip handles
- Wire size markings, in AWG and mm
- Size: 6.0"L x 2.0"W

161226CP: T-5
- 10-18 AWG solid
- Premium
- Color: yellow

161234CP: T-6
- 16-26 AWG stranded
- Premium
- Color: red

161218CP: T-6
- 16-26 AWG stranded
- Standard
- Color: red

161226CP   161234CP
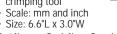
Part No.	Prod. No.	Description	1	10
161226CP	ID45-215	T-5 10-18 AWG	$15.95	$14.49
161234CP	ID45-216	T-6 16-26 AWG	15.95	14.49
161218CP	ID45-121	T-6 16-26 AWG	13.95	12.95

7-in-1 Wire-Handling Tool

- Wire stripper, wire cutter, steel wire cutter, pliers and wire loop
- Solderless crimping tool
- Scale: mm and inch
- Size: 6.6"L x 3.0"W

18796CP

Part No.	Prod. No.	Description	1	10	50
18796CP	HT104	10-18AWG	$4.95	$4.49	$3.95
127861CP	HT1042	16-26AWG ...	4.95	4.49	3.95
127870CP	HT1043	22-30AWG ...	4.95	4.49	3.95

6.6" Wire Stripper

22-30 AWG

- Wire stripper, cutter, steel wire cutter, and wire loop
- Scale: AWG and mm
- Strips and cuts wires from 20-30 AWG
- Size: 6.6"L x 2.0"W

Part No.	Product No.	1	10	50
159290CP	HT5023	$8.95	$7.95	$6.95

5" Wire Cutter/Strippers

78991CP

- Insulated handles
- Spring return
- Tempered steel cutting edge
- Size: 5.0"L x 3.0"W
- One-year warranty

215888CP

78991CP: 10-30 AWG (screw adjustable)
215888CP: 10-24 AWG (dial to adjust for wire gauge)

Part No.	Mfr. Cross Ref. No.	1	10	50	100
78991CP	HT108	$3.95	$3.49	$2.95	$2.59
215888CP	JE-2022C	3.95	3.49	2.95	2.59

Rotary Coax Cable Strippers

2 and 3 Blade

159118CP (3 Blade):
Two settings RG58/59/62
- For cable sizes 4-10mm
- Size: 4.2"L x 1.3"W
- Color: black

159118CP

159185CP (2 Blade):
Four settings RG58/59/62/174
- For cable sizes 4-12mm
- Size: 3.9"L x 0.7"W
- Color: gray

159185CP

Includes: Hex key wrench for adjusting blade

Part No.	Product No.	1	10	25
159118CP	HT312B (3 blade)	$12.95	$11.49	$9.95
159185CP	HT332D (2 blade)	12.95	11.49	9.95

Coaxial Cable Stripper

- Strips RG58, 59 and 62 cable
- Replaceable blades
- Size: 4.2"L x 0.8"W

SALE
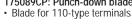
Part No.	Description	1	10
73066CP	3 bladed coax cable stripper	$10.95	$9.95

Impact Punch-Down Tool

- Reversible clip-in blade
- Adjustable (HI-LO) spring-loaded impact mechanism
- Storage bin on handle for spare blade

175071CP

175071CP: Punch-down tool with blade
- For 66-type terminals
- Size: 5.2"L x 1.5"W x 1.0"H

175089CP: Punch-down blade
- Blade for 110-type terminals

175089CP

Part No.	Description	1	10
175071CP	Tool w/ 66 blade	$39.95	$35.95
175089CP	Punch-down blade 110	14.95	13.49

Impact Punch-Down Tool

Conforms to AT&T performance specification. Reversible clip-in blade, adjustable spring-loaded impact mechanism and spare storage blade in the handle.

124142CP

- One-year warranty

124142CP: For 66-type bifurcated terminals
- Size: 7.0"L x 1.4"W x 1.1"H

124151CP

124151CP: Blade for 110-type terminals

Part No.	Description	1	10
124142CP	Tool with blade	$49.95	$44.95
124151CP	#110 blade	19.95	17.95

Telemaster Modular Crimp/Cut/Strip Tool

For RJ11 (6P) and RJ45 (8P) Modular Plugs
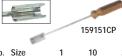
- Repeatable crimp action for consistent high quality connectors
- Size: 6.0"L x 2.0"W
- Weight 0.8 lbs.

Includes: Cut and strip blade

Part No.	Prod. No.	Description	1	10
161091CP	ID30-496	Telemaster tool	$41.95	$37.95

BNC Connector Removal Tools

- For deep chassis removal
- Allows access to hard-to-reach places

159151CP

Part No.	Mfr. Cross Ref. No.	Size	1	10	25
159151CP	HT2206	6"L	$8.95	$8.09	$7.25
152047CP	HT2212	12"L	14.95	13.49	11.95

BNC Hex Crimping Tool

RG58/59/62/142

- Crimps BNC connectors to RG58/59/62/142
- Crimps center pin
- Adjustable grip opening
- Insulated grip handles
- Size: 9.0"L x 2.0"W
- Weight: 1.5 lbs.

Part No.	Product No.	1	10	25
159302CP	HT106D	$11.49	$10.39	$9.29

IDC Connector Crimping Tool

- Crimping distance: 27.5mm to 6mm (with attachment)
- Cushioned red handles
- Crimp insulation displacement connectors
- Use for IDC socket connectors, pg 127
- Size: 9.2"L x 3.0"W • Weight: 1.1 lbs.

Part No.	Product No.	1	10	25
73251CP	HT214	$14.95	$13.49	$12.15

Modular Crimping Tool Set

- 8" metal modular crimping tool
- Cuts, strips and crimps
- Crimps RJ11 and RJ45 plugs
- Carrying case: blue hard plastic, 8.0"L x 10.5"W x 2.0"H
- Weight: 2.1 lbs.

Includes: 90 modular plugs, 40 pcs. 4P4C, 30 pcs. 6P6C, 20 pcs. 8P8C

Part No.	Product No.	1	10	25
73496CP	HT2000B	$79.95	$69.95	$62.95

Don't worry about backorders.
Over 99% of our products are in stock!

We'll Send It Today!

Just place your order by 6PM EST for same business day shipment.

Crimp/Cut/Strip Tool

For RJ11 (6P) and RJ45 (8P) Modular Plugs

- Repeatable crimp action for consistent high-quality connections
- Push-down locking mechanism
- Size: 8.0"L x 2.0"W
- Weight: 0.8 lbs.

Includes: Cut and strip blade

Part No.	Mfr. Cross Ref. No.	1	10
174684CP	TTK071	$34.95	$31.49

Professional Modular Crimping Tool

- Spring return action
- 6mm and 12mm stripping guide
- Crimp modular plugs without changing dies
- Crimps 10P10C, RJ45: 8P8C, RJ11 and RJ12: 6P6C, and 4P4C (Handset)
- Insulated handles
- Size: 8.2"L • Weight: 1.2 lbs.

Part No.	Mfr. Cross Ref. No.	1	10	25
181147CP	HT200	$57.95	$53.95	$48.95

Plastic Modular Crimping Tool

- Crimps 4P, 6P and 8P plugs (4P2C, 4P4C, 6P2C, 6P4C, 6P6C, 8P2C, 8P4C, 8P6C, 8P8C)
- Size: 8.0"L

Part No.	Description	1	10	25
116097CP	RJ11 crimping tool	$10.95	$9.95	$8.95

Metal Modular Crimping Tools

- Cable stripper and wire cutter
- Size: 8.0"L
- Weight: 1.8 lbs.
- **73091CP:** Crimps 4P and 6P plugs (4P2C, 4P4C, 6P2C, 6P4C, 6P6C)
- **114526CP:** Crimps 6P and 8P plugs (6P2C, 6P4C, 6P6C, 8P2C, 8P4C, 8P6C, 8P8C)

114526CP

Part No.	Description	1	10	25
73091CP	RJ11	$16.95	$15.25	$13.79
114526CP	RJ11/RJ45	21.95	19.79	17.79
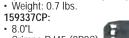
Ratcheted Modular Crimping Tools

- Insulated grip
- Ratcheted type
- Metal

159311CP:
- 7.5"L
- Crimps RJ45 (8P8C) and RJ11/12 (6P6C)
- Weight: 0.7 lbs.

159311CP

159337CP:
- 8.0"L
- Crimps RJ45 (8P8C) and RJ11/12 (6P6C) and handset (4P4C)
- Weight: 1.2 lbs.

SALE

159337CP

Part No.	Description	1	10	25
159311CP	RJ45/11/12	$21.95	$19.95	$17.95
159337CP	RJ45/11/12	51.95	48.95	45.95

Non-Insulated Terminal D-Sub Crimping Tool

14-26 AWG

- Heavy-duty metal crimping tool with cutter and insulated handles
- For computer pins and sockets, D-sub 26-28 AWG wire
- For butt-insulated connectors, 22-26 AWG wire
- For telephone spade lugs, 22-26 AWG wire
- For non-insulated connectors, 20-22 AWG wire
- For non-insulated connectors, 14-18 AWG wire
- Coiled spring return • Size: 7.3"L x 1.5"W

Part No.	Product No.	1	10	25	100
99442CP	HT202A	$8.95	$7.95	$6.95	$6.29

D-Sub Crimping Tool

20-28 AWG

- Crimps D-sub pins and sockets
- For use with P/Ns 43377CP, 43369CP, pg 126 and 100765CP, pg 128
- Size: 7.0"L x 4.0"W

Part No.	Product No.	1	10	25
159265CP	HT213	$9.95	$8.95	$7.95

Ratcheted BNC Crimping Tool

- Crimps RG58, RG59, RG62, RG174 and fiber optic
- All steel construction
- Size: 8.5"L x 2.5"W
- Weight: 1.1 lbs.

Part No.	Product No.	1	10	25
114534CP	HT-3019	$22.95	$19.95	$17.95

Solderless Terminal Crimping Tool

- Crimps solderless terminals: 18-22 AWG red, 14-16 AWG blue and 10-12 AWG yellow
- Size: 9.0"L x 2.0"W

Part No.	Mfr. Cross Ref. No.	1	10	25
72995CP	HT303	$17.95	$15.95	$13.95

Ratchet Crimp Tool

For RJ11 (6P) and RJ45 (8P) Modular Plugs

- Repeatable crimp action for consistent high-quality connections
- Size: 8.5"L x 2.2"W
- Weight: 1.2 lbs.

Includes: Cut and strip blade

Part No.	Mfr. Cross Ref. No.	1	10
174676CP	TTK070	$42.95	$38.95

Nibbling Tool

- Perfect for cutting, trimming, or notching sheet metal up to 18 AWG
- Time-saver when working on prototyping, chassis, and circuit boards
- Minimum .375" hole required
- Size: 7.8"L

18809CP
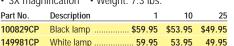
Part No.	Prod. No.	Description	1	10	25
18809CP	HT204	Nibbling tool	$8.95	$7.95	$6.95
29330CP	HT204B	Replacement bit	4.95	4.49	3.95

Color Code Legend
New Sale Qty Save Closeout

3X Magnifying Lamps

- 45" extension arm
- Supplied with 22-watt Circuline tube
- New wire clip design permits easy installation
- Extra strong, all-metal mounting base with electrical outlet
- Metal bulb holder for extra protection
- Power requirement: 110VAC/60Hz
- 3X magnification • Weight: 7.3 lbs.

SALE

Part No.	Description	1	10	25
100829CP	Black lamp	$59.95	$53.95	$49.95
149981CP	White lamp	59.95	53.95	49.95

Standard Adjustable 3X Magnifying Lamp

- 4" Diameter lens
- Maneuverable 30" arm extension
- Lamp tilts or turns in any direction
- Uses 60W incandescent bulb (not included)
- 3X magnification
- Power requirement: 110VAC/60Hz
- Weight: 2.9 lbs.

Part No.	Description	1	10	25
22710CP	Magnifying lamp	$29.95	$26.95	$23.95

Precision 5X Magnifying Lamp

With an arm that extends to 40" long, adjustable to any direction or angle, and 5X magnifying glass with built-in light, this is the perfect tool to help identify small electronic components, and magnifying a printed circuit board to help you solder electronic components to.

- 5" diameter lens
- Power requirement: 110VAC/60Hz
- Weight: 7.1 lbs.

Includes: 22W circuline fluorescent bulb

Part No.	Description	1	10	25
197456CP	Magnifying lamp	$109.95	$98.95	$88.95

3X Magnifier with Adjustable Stand

- Heavy duty steel base
- Size: 15"L (full stand) x 4"Dia. (base)

Part No.	Description	Wt. (lbs.)	1	10
148881CP	Magnifier	2.5	$14.39	$12.95

General Purpose Illuminated 3X Magnifier

- 3X power
- 75mm diameter lens
- Great for magnifying fine print
- Light requires 2 AA batteries, see below
- Size: 7.5"L x 3.75"Dia.

Part No.	Description	1	10	25
149542CP	Illuminated magnifier	$4.49	$3.95	$3.49
151087CP	1.5V AA battery (req. 2)	.25	.23	.21

Photon Micro-Light Keychains

- Shines astonish-ingly bright
- Lights any path
- Micro size (same weight as a quarter)
- Visible for more than a mile
- Lifetime warranty

Includes: Lithium battery

163256CP   163264CP

Part No.	Description	1	10
163256CP	White Micro-Light® keychain .	$17.95	$15.95
163264CP	Blue Micro-Light® keychain	17.95	15.95

Black Desk Lamp

- Ventilated metal shade
- Double shade reduces glare
- Max. bulb size 60W (not included)
- Power requirement: 110VAC/60Hz
- Rotating on-off switch
- Base size: 5.5" diameter
- Height: 16.0" • Weight: 2.5 lbs.

Part No.	Description	1	10	25
159951CP	Desk lamp	$2.99	$2.59	$2.29

AA-Battery Flashlight

- Black hard plastic body
- Size: 6.0"L x 0.9"D

Requires: 2 AA batteries (listed below)

Part No.	Description	1	10	100
159812CP	GE flashlight	$1.95	$1.55	$1.19
151087CP	AA batteries	.25	.23	.19

Digital Display Calipers

Metric or Inches

- Hardened stainless steel
- Display: inches to 1/1000THS mm to 1/100THS
- Resolution: 0.01mm (0.0005")
- Instructions for making internal, external, depth and step measurements
- Auto-off after 5 minutes
- Calipers measure to 6 inches/150mm
- Weight: 0.8 lbs.
- One-year warranty

Includes: Fitted case and 1.5V silver oxide battery (replacement battery, P/N 140783CP, pg 200)

Part No.	Description	1	10	25
127482CP	Digital disp. calipers	$59.95	$53.95	$48.95

Metal Dial Calipers

Metric or Inches

- For accurate measurements every time
- Measures outside, inside and depth
- Easy-to-read dial gauge
- Materials: metal
- Length: 6" (150mm)
- Color: silver
- Weight: 0.7 lbs.

Includes: Fitted plastic storage case

116134CP

Part No.	Description (min. reading)	1	10	25
116134CP	Metric (.02 mm)	$27.95	$24.95	$22.49
116126CP	Inches (.001 inch)	27.95	24.95	22.49

Professional Tool Case

- Aluminum framed
- Padded interior and adjustable dividers (6 sections)
- Detachable tool organizer for easy access
- Color: black with aluminum trimmings
- Size: 18"L x 13"W x 6"H
- Weight: 8.1 lbs.

Part No.	Description	1	10
149016CP	Professional tool case	$37.95	$33.95

26-Piece SAE Hobby Tool Set

- 4-1/2" long nose pliers
- 4-1/2" diagonal cutting pliers
- #1 and #2 Phillips bits
- #1 and #2 pozi bits
- 3/16" and 1/4" slotted bits
- Hex to 1/4" driver adapter
- T-10, T-15, and T-20 TORX bits
- Driver handle • Tweezers
- 3" extension bar for 1/4" drive
- 3 slotted and 3 screw driver precision set
- 3/16", 1/4", 11/32" and 3/8" sockets for 1/4" drive
- Compact carrying case
- Size: 12.0"L x 9.0"W x 2.0"H
- Weight: 1.5 lbs.

Part No.	Description	1	10	25
170069CP	26 pc. SAE tool set ...	$14.95	$12.95	$10.95

26-Piece Metric Hobby Tool Set

- 6 screwdrivers: Phillips #0, #1, slotted 0.05", 0.08", 0.09", 0.12"
- 10 bits: 5mm, 6mm, #No.1, #No.2, No.1, No.2, T-10, T-15, T-20, socket adapter
- Stainless steel tweezers • Sockets: 5, 6, 8, 10mm
- Extension bar • Handle
- 4" long nose pliers • 4" side cutter
- Plastic carrying case
- Size: 6.4"L x 4.1"W x 2.0"H
- Weight: 1.2 lbs.

Part No.	Description	1	10	25
99629CP	26-piece tool set	$9.95	$9.45	$8.95

Precision Micrometer

0"–1" Range ± .0001"

Forged steel frame precision micrometer is complete with chrome barrel and thimble for easy-to-read contrasting graduation. Hardened, precision-ground measuring surface with positive spindle lock holds measurements. Accurate to .0001". Quick and easy zero adjustment with spanner wrench.

- Length: 5.4"
- Weight: 0.7 lbs.

Part No.	Description	1	10	25
169543CP	Precision micrometer	$14.95	$13.49	$11.95

Electronic Technician Tool Kits for Every Situation!

51-Piece Tech Tool Kit
Essential Kit for Electronic Machine Maintenance and Repair Jobs!

See matrix below for list of tools. Case features removable pallets, a combination lock and a cushioned, black plastic handle.
- Size: 12.5"L x 17.5"W x 3.5"H
- Weight: 10.4 lbs.

Part No.	Description	1	5
26681CP	51-piece tool kit $99.95		$89.95

55-Piece Tech Tool Kit

An assortment of tools for general & precision work for technicians, engineers, students, etc.
- In addition to the tools listed in the matrix below, the kit includes:
  – screwdriver handle
  – 6 piece mini-hammer set
  – 5 piece of double edge blade
- Carrying case has outer velcro pockets to store paperwork, etc.
- Complete your assortment with a multimeter (See pages 139-140)
- Size: 17.6"L x 12.8"W x 4.0"H   • Weight: 9.2 lbs.

Part No.	Description	1	5
136311CP	55-piece tool kit $129.95		$116.95

66-Piece Tech Tool Kit
Kit for Field Technicians and Engineers!

Aluminum case features removable pallets, surface-type locks, a black plastic handle, side buckles and a strap.
- In addition to the tools listed in the matrix below, the kit includes:
  – mini vacuum cleaner
  – cassette head cleaning fluid
  – keyboard/monitor spray cleaner
  – long nose pliers with cutter   – hobby vice
- Size: 18.0"L x 14.0"W x 6.0"H   • Weight: 15.5 lbs.

SALE

Part No.	Description	1	5
105646CP	66-piece tool kit $179.95		$164.95

69-Piece Tech Service Tool Kit

- In addition to the tools listed in the matrix below, the kit includes:
  – 40 pc. socket pack
  – 6" side cutter
  – 6" long nose plier
  – 6" slip joint plier
  – carpenter hammer
  – 3 piece trimmer set
  – stainless steel spring hook   – solder wick
  – 8" combination plier   – 2 removable pallets
- Size: 18.5"L x 13.8"W x 6.7"H   • Weight: 22.8 lbs.

Part No.	Description	1	5
149024CP	69-piece tool kit $259.95		$235.95

11 & 12-Piece Lightweight Computer-Service Tool Kits

- In addition to the tools listed in the matrix below, both kits include: 2 nut drivers: 3/16", 1/4", 3-claw parts holder

167206CP: 11-Piece Tool Kit
- In addition this kit includes: clear components, tube holder
- Size: 8.5"L x 5.9"W x 1.3"H
- Weight: 1.1 lbs.

167206CP

14189CP: 12-Piece Tool Kit
- In addition this kit includes: 14-16 pin IC inserter/straightener
- Size: 9.0"L x 5.8"W x 1.3"H
- Weight: 1.2 lbs.

14189CP

Part No.	Description	1	10	25
167206CP	11-piece tool kit $12.95	$11.49	$9.95	
14189CP	12-piece tool kit 14.95	13.49	11.95	

40-Piece Electronic Tech Tool Kit

- In addition to the tools listed in the matrix below, the kit includes:
  – wire cutters
  – adapter bit for sockets
  – pocket clip screwdriver
  – potentiometer alignment tools
  – T10-T25 reversible TORX screwdriver bits
  – 3/16"-1/2" S.A.E. nut driver sockets
  – 6mm-12mm metric nut driver sockets
  – slotted and Phillips screwdriver bits
  – extra long 3-claw parts holder
  – IC inserter w/ pin straightener
- Size: 9.5"L x 6.8"W x 1.4"H   • Weight: 1.7 lbs.

Part No.	Description	1	10	25
119183CP	40-piece tool kit $19.95	$17.95	$15.95	
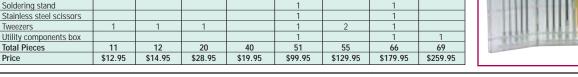
20-Piece SAE Computer Tool Kit

- In addition to the tools listed in the matrix left, the kit includes:
  – 6' solder
  – 8" wire cutter/stripper
  – Clamping tweezers
  – 3-pronged parts retriever
  – Spare parts tube
  – Flashlight with battery
  – Heavy duty molded case
  – 2 nut drivers (1/4" & 3/16")
- Size: 11.9"L x 9.2"W x 2.0"H   • Weight: 3.5 lbs.

Part No.	Description	1	10	100
170966CP	Computer tool kit $28.95	$25.95	$22.95	

For more Tool Kits See pages 3, 208 & 209

Quick-Reference of Special Tool Kit Contents

Parts included in kits	167206CP	14189CP	170966CP	119183CP	26681CP	136311CP	105646CP	149024CP
3-piece soldering aid kit					1	1	1	1
3-prong holder						1	1	1
5-way crimping tool						7-way	1	1
6 precision screwdrivers					short	1	long	1
Hex key wrench	1-pc	1-pc	1-pc		7-pc	7-pc		7-pc
10-foot measuring tape					1			1
10-piece mini wrench set							1(SAE)	1
30-watt soldering iron			1		1	1	1	1
Adjustable wrench			1		1	1	1	1
Anti-static strap						1	1	1
8" lineman's pliers						1	1	
Bent needle nose pliers					1	1		1
Brush					1	1	1	1
Carrying case	1	1	1	1	1	1	1	1
Desoldering pump					1	1	1	1
Diagonal cutting pliers					1	1	1	1
Digital Multimeter					1		1	
Electrical test screwdriver							1	
Electrician's tape					1		1	1
Flat nose pliers					1	1		1
Forceps								1
Heat sink						1		1
Heavy-duty utility knife					1	1	1	
IC extractor	1	1	1	1		1	1	1
Inspection mirror								1
Mini drill							1	1
Mini flashlight						1	1	1
Needle files					2	5	5	5
Needle nose pliers			1		1	1	1	
Precision wire stripper				1				1
Rosin core solder					1	1	1	1
Screwdriver set	4-pc	4-pc	6-pc	10-pc	10-pc	2-pc	13-pc	9-pc
Snipe nose pliers								1
Soldering stand					1		1	
Stainless steel scissors					1		1	
Tweezers	1	1	1		1	2	1	
Utility components box					1		1	1
Total Pieces	11	12	20	40	51	55	66	69
Price	$12.95	$14.95	$28.95	$19.95	$99.95	$129.95	$179.95	$259.95

Color Code Legend
New Sale Qty. Save Closeout

SALE

Pentium® II Class Motherboards
ATX Motherboards are compatible with Intel Pentium® II processors.

| 188082CP | 188091CP | 185367CP | 188074CP | 185359CP | 185682CP | 185674CP | 185666CP |

Part No.	188082CP	188091CP	185367CP	188074CP	185359CP	185682CP	185674CP	185666CP
Processor	Slot 1*	Slot 1*	Slot 1	Slot 1*	Slot 1	Socket 370	Dual Slot 1	Dual Slot 1
Speed	233-333 MHz	233-333 MHz	233-333 MHz	233-266 MHz	233-333 MHz	366-533MHz	233-333MHz	233-333MHz
Chip set	440LX	440LX	440LX	440LX	440EX	i810M	440LX	440LX
BIOS	Award	Award	Award	Award	Award	AMI	Award	Award
Memory	SIMM (72-pin)	EDO (168-pin)	EDO (168-pin)	EDO (72-pin)	SDRAM (168-pin)	SDRAM (168-pin)	EDO (168-pin)	SDRAM (168-pin)
Capacity	384MB	768MB	384MB	384MB	256MB	512MB	1,024MB	512MB
Slots	6	3	3	6	2	2	4	4
Speed	66 MHz	66 MHz	66 MHz	66 MHz	66 MHz	66/100MHz	66MHz	66MHz
Slots								
PCI	5	4	4	5	2	3	5	5
AGP	None	1	1	1	1	Integrated	1	1
ISA	3	3	3	3	2	None	2	2
Interfaces								
Hard Drive	4 EIDE	4 EIDE	4 EIDE	4 EIDE	4 EIDE	4 ATA-66	2 IDE, SCSI	4 EIDE
Floppy	2	2	2	2	2	2	2	2
USB	2	2	2	2	2	2	2	2
Parallel	1	1	1	1	1	1	1	1
Serial	2	2	2	2	2	2	2	2
IrDA	None	None	None	1	None	None	None	None
Sound	CS4237B	None	None	None	ESS	ES1373	None	None
Keyboard	PS/2	PS/2	PS/2	PS/2	PS/2	PS/2	PS/2	PS/2
Video	None	None	None	None	None	4MB	None	None
Size	12" x 9.6"	12" x 7.5"	12" x 7.4"	12" x 9.6"	9" x 7.8"	9.6" x 7.5"	12" x 9.6"	12" x 9.6"
Weight	2.6 lbs.	2.5 lbs.	2.5 lbs.	2.6 lbs.	1.9 lbs.	1.5 lbs.	3.0 lbs.	3.0 lbs.
Price 1	$16.65	$30.15	$27.29	$12.49	$24.95	$46.69	$36.65	$31.95
Price 10	$15.15	$27.45	$24.49	$11.25	$22.45	$41.99	$33.29	$28.75

* Also supports the Intel Celeron™ processor **Socket 370:** Intel Celeron™ PPGA Package processor (see page 65) **Slot 1:** Intel Pentium® II processor (see page 65)

DIMM and SIMM Memory
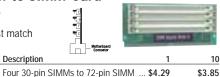
148398CP   148443CP

Part Number	Mfr. Cross Ref. No.	Pins	Description	1	10
148398CP	4MBX64SDRAM	168	4M x 64 10ns Syn. DRAM DIMM (32MB)	$16.95	$15.95
148401CP	8MBX64SDRAM	168	8M x 64 10ns Syn. DRAM DIMM (64MB) ..	35.95	32.29
148419CP	16MBX64SDRAM	168	16M x 64 10ns Syn. DRAM DIMM (128MB)	69.95	62.99
130729CP	JEEDO7208	72	2M x 32 60ns SIMM EDO module (8MB) ..	11.95	8.39
130711CP	JEEDO7216	72	4M x 32 60ns SIMM EDO module (16MB) ..	24.95	22.95
148443CP	JEEDO7232	72	8M x 32 60ns SIMM EDO module (32MB)	43.95	39.59
148451CP	JEED07264	72	16M x 32 60ns SIMM EDO module (64MB)	29.95	28.45
75133CP	P361000-XX-6	72	1M x 36 60ns SIMM module (4MB)	12.95	11.65
75096CP	P362000-XX-6	72	2M x 36 60ns SIMM module (8MB)	28.49	25.95
75184CP	P364000-XX-6	72	4M x 36 60ns SIMM module (16MB)	49.95	44.95
75168CP	P364000-XX-7	72	4M x 36 70ns SIMM module (16MB)	45.95	41.49
148460CP	8MBX36-60	72	8M x 36 60ns SIMM module (32MB)	87.95	79.19
41751CP	421000A9B-70	30	1M x 9 70ns SIMM module (3 chips)	3.95	3.45
53701CP	94000S-70	30	4M x 9 70ns SIMM module (9 chips)	10.15	9.15
148478CP	16MBX9-60	30	16M x 9 60ns SIMM module (9 chips)	29.95	28.45

SIMM to SIMM Card

- Converts four 30-pin SIMMs to one 72-pin SIMM
- Memory size and speed must match
- Easy-release locking clips

Motherboard Connector

Part No.	Mfr. Cross Ref. No.	Description	1	10
157500CP	30/72A	Four 30-pin SIMMs to 72-pin SIMM ...	$4.29	$3.85

Celeron 400-700MHz and Pentium III 533-1000MHz
Intel 815E (Solano 2) Chipset

- Phoenix Bios
- Windows Plug and Play compatible
- Slot 370 type for Celeron 400MHz-700MHz or Pentium® III 533MHz to 1000MHz
- Supports three 168-pin SDRAM PC100/ PC133 memory upgradeable to 512MB
- 6 PCI slots and 1 AGP slot
- On-board I/O controller: 2 EIDE ports that support 4 EIDE devices, floppy drive port that supprots LS-120 drive; IRDA port
- PS/2 female keyboard and mouse; 2 USB ports; DB9 male and female serial ports; DB25 female parallel port; DB15 female game port; 3 audio I/O jacks (modular connectors)
- 20-pin ATX form factor • Size: 12.0"L x 8.8"W • Weight: 3 lbs.

Includes: Manual and drivers on CD-ROM

Part No.	Mfr. Cross Ref. No.	Description	1	10
218835CP	SY-71SA	Celeron and Pentium® III motherboard	$64.95	$59.95

Need Help Finding Related Products?

CPU Heat Sinks	page 155
Power Supplies	page 156
Racks and Cases	page 163

Programmable Dual-Fan Cooler with Multiple Sensors

- Fits 5.25" bay
- 5.3 CFM (per fan)
- Audible overheat alarm
- Digital display: 1.86"W x 1.0"H
- Backlight color: green
- Measures two sensors
- Size: 6.0"W x 2.4"D x 1.7"H
- Weight: 0.5 lbs.

Includes: CR2032 3V battery and one sensor

Part No.	Description	1	10	25
148742CP	Dual fan cooler	$27.69	$24.95	$22.49

Back Panel PC Cooling Fan
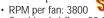
- Type: sleeve axial fan
- Back panel mountable
- Operating volt.: 12VDC @ 140mA
- Airflow: 43 CFM
- Noise ratio: 26dBA
- Power: 1.7W
- 10.5" wire with 4-pin Molex power connector
- Size: 4.3"L x 3.5"H x 1.1"Thick
- One-year warranty

Part No.	Description	1	10	50
152240CP	PC cooler fan	$19.95	$17.95	$15.95

5.25" Hard Drive Cooling Assembly

Dual Fans for Even Cooling

Keep your hard drive cool by using less space. These hard drive cooling fans have 2 high-airflow fans that provide 70% heat dissipation.

- RPM per fan: 3800
- Combined airflow: 28 CFM
- Dual 12V sleeve bearing fan
- Power consumption: 1.44W each
- Easy installation
- Size: 5.7"L x 5.5"W x1.2"H

Includes: Mounting hardware

Part No.	Description	1	10	25
175302CP	HD cooler (5.25")	$11.45	$10.15	$9.19

Pentium® II Heat Sink Support

Compatible with Pentium® heat sinks (P/N 151298CP, right)

- 10 pc. minimum

Includes: Plastic fasteners

Part No.	Description	10	25
169009CP	Heat sink support	$25	$20
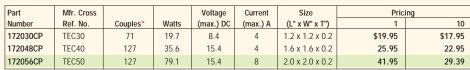
PC Monitor Power Cables

- Allows connection of monitors directly to standard IBM type power supplies
- Monitor turns on/off automatically via system power switch
- IBM PC/XT and higher compatibles
- See page 60 for more power adapter cables

26382CP

Part No.	Description	1	10	100
177447CP	1' monitor cable	$2.95	$2.49	$2.15
26382CP	6' monitor cable	2.19	1.95	1.79

Thermoelectric Cooler Chips

- Cools down to -30°C (dependent on external temperature)
- T max. = 60°C
- 20 AWG wire leads, 4" long
- Heat or cool by changing direction of current
- Operating voltage: 15.4VDC nominal

172048CP

Part Number	Mfr. Cross Ref. No.	Couples*	Watts	Voltage (max.) DC	Current (max.) A	Size (L" x W" x T")	Pricing 1	10
172030CP	TEC30	71	19.7	8.4	4	1.2 x 1.2 x 0.2	$19.95	$17.95
172048CP	TEC40	127	35.6	15.4	4	1.6 x 1.6 x 0.2	25.95	22.95
172056CP	TEC50	127	79.1	15.4	8	2.0 x 2.0 x 0.2	41.95	29.39

* Couples: # of P&N type semiconductor pairs connected electrically in series

CPU Heat Sinks and Fans

See page 18 for Heat Sink Compounds

See page 7 for CPUs

151298CP   206244CP   196242CP   181278CP   195784CP

196074CP   207044CP   190545CP   203115CP   203123CP

185607CP   118092CP   129226CP/129234CP   191636CP   174115CP

- Excellent for avoiding CPU overheating during extended system on-time
- High efficiency cooling fans
- Easy installation – just snap it in

Part No.	Description	Size (H" x W" x D")	Agency Approvals	1	10	50	100
151298CP	Heat sink w/ fan for slot 1 (SECC 1)	4.90 x 2.15 x 1.34	UL/CE/TUV	$10.95	$9.89	$8.89	$6.95
206244CP	Heat sink w/ dual fan slot (SECC 2)	5.25 x 1.95 x 1.30	CE	12.95	11.65	10.49	9.49
196242CP	Heat sink w/ fan for socket 7 (ATX)	2.26 x 2.12 x 1.07	UL/CE/TUV	9.95	8.95	7.95	6.95
181278CP	Heat sink w/ fan for socket 7 (ATX)	2.12 x 2.05 x 1.67	UL/CE/CSA	8.49	7.65	6.89	6.19
195784CP	Heat sink w/ fan for socket 7 (AT/ATX)	2.12 x 2.13 x 1.52	—	9.95	8.95	7.95	7.95
196074CP	Heat sink w/ fan for socket 7 (AT)	2.40 x 2.26 x 1.08	UL/CE/TUV	10.95	9.89	8.89	7.95
207044CP	Heat sink w/ fan for socket 370 (ATX)	2.48 x 2.00 x 1.32	UL/CUL/CE/TUV	14.95	13.49	11.95	10.75
190545CP	Heat sink w/ fan for socket 370	2.45 x 2.42 x 2.10	—	14.99	13.99	12.99	11.99
203115CP	Heat sink for Pentium® Pro– adhesive back	2.18 x 1.95 x 0.76	UL/CSA/TUV/CE	2.49	2.29	2.19	1.89
203123CP	Heat sink for Pentium® Pro– adhesive back	2.34 x 2.10 x 1.77	UL/CSA/TUV/CE	2.79	2.55	2.29	2.09
185607CP	Heat sink w/ fan for Pentium® Pro	2.75 x 2.84 x 1.75	UL/CE/TUV	14.95	13.49	11.95	10.75
118092CP	Heat sink w/ fan for 586 CPU w/ snap	2.18 x 2.30 x 0.86	UL/CE/TUV	4.95	3.69	3.49	2.59
129226CP	Heat sink for 486 CPU – adhesive back	1.70 x 1.63 x 0.36	—	2.95	2.65	2.39	2.15
129234CP	Heat sink for 486 CPU – adhesive back	1.70 x 1.64 x 0.66	—	3.95	3.55	3.19	2.79
191636CP	Heat sink w/ fan for 486 CPU w/ clip	1.85 x 1.92 x 0.72	UL/CE/TUV	5.95	4.79	3.59	3.59
174115CP	Heat sink w/ fan for 486 CPU w/ snap*	1.93 x 1.96 x 0.93	UL/CUL	3.95	3.55	2.95	2.65

* 14" lead wires

U.S. Robotics® Wireless Audio Broadcast System

Why limit your music's reach when you can listen to your favorite tunes anywhere. Release your MP3s and Internet radio from the confines of your computer and listen to them in HI-FI on stereo from the living room. Simply plug the transmitter into a music source (PC/MP3 player, CD/DVD, etc.) and either plug the receiver unit into your stereo's audio input or simply set your FM tuner to 88.1 or 88.3 station.

- Listen and enjoy internet radio/audio on your home stereo or any FM receiver
- Wireless freedom to rebroadcast music where you are
- Transmits on 900MHz frequency up to 1000'
- Compatible with any audio device's 3.5mm or RCA output jack
- Size: (transmitter) 3.8"H x 4.9"W x 4.0"D; (receiver) 3.7"H x 4.9"W x 3.7"D
- Weight: 2.2 lbs.

Includes: Two 6VDC @ 100mA power supply, 3.5mm stereo cable, 3.5mm to RCA cable, RCA cable

Part No.	Description	1	5
210981CP	Wireless Audio System	$74.95	$67.45

Color Code Legend
New Sale Qty. Save Closeout

Color Code Legend
New | Sale | Qty. Save | Pull | Refurbished | Closeout

ATX 150-Watt

- Output:
  +3.3V @ 6A
  +5V @ 10A
  +12V @ 6A
  +5VSB @ 0.72A
  -5V @ 0.2A -12V @ 1A
- 20-pin ATX form factor
- Mating input connector: suggest using P/N 38050CP power cord, pg 47 – not included
- Built-in fan • Power on/off switch
- Input voltage: 115/230VAC @ 50-60Hz (auto switching)

Special Purchase LOW LOW PRICE

Part No.	Product No.	Description	1	10	25
196189CP	MPW-6150F	150W ..	$34.95	$31.49	$27.95

AT 200-Watt

- Output:
  +5V @ 20A
  +12V @ 8A
  -5V @ 0.5A
  -12V @ 0.5A
- Input voltage: 115/230VAC @ 50-60Hz (switchable)
- AT compatible connectors
- Mating input connector: 3-prong AC receptacle with 6' power cord
- Built-in fan

Includes: 6' power cord

Part No.	Product No.	Description	1	10	25
172822CP	AA-230	200W	$44.95	$39.95	$35.95

ATX 250-Watt + 250-Watt Redundant

SALE

- Output:
  +3.3V @ 15A
  +5VSB @ 1.5A
  +5V @ 30A
  +12V @ 14A
  -5V @ 0.5A -12V @ 1A
- Hot swappable; power fail alarm
- Input volt.: 90-264VAC @ 47-63Hz (auto ranging)
- Built-in fan
- 20-pin ATX form factor
- Internal OR-ing diode for redundant operation

Part No.	Product No.		1	10	25
201443CP	EPR2251		$136.85	$124.39	$113.49

SALE 145 to 400-Watt PC Power Supplies

Part Number	Mfr.	Product Number	Power (W)	Output (VDC/A)	Input (VAC @ Hz)	Input Connector (Mating Connector/Cord)	Output Conn. (Mating Conn.)	Certification	Size (L" x W" x H")	Wt. (lbs.)	Pricing 1	10	25
201435CP	Xtreme Power	EPA400	400	+3.3/33, +5/45, +12/15, +5VSB/1, -5/1, -12/1	115/230 @ 47-63 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV/CE	5.6 x 5.9 x 3.4	5.0	$109.95	$82.95	$57.95
155539CP	American Media	JE2033	300	+3.3/14, +5/30, +12/8, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.9 X 5.5 X 3.4	3.7	69.95	62.95	56.95
155811CP	—	JE5300	300	+3.3/14, +5/25, +12/12, +5VSB/0.8, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.9 x 5.5 x 3.2	4.1	79.95	71.95	64.95
191505CP	Hipro	HP250NLXAA	250	+3.3/14, +5/27, +12/9, +5VSB/1.0, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	ATX	UL/CSA/TUV/CE	5.5 x 5.9 x 3.5	3.1	34.95	24.95	15.95
205938CP	TGR	FA250N16	250	+3.3/14, +5/25, +12/10, +5VSB/3, -5/0.5, -12/1	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	ATX	UL/CUL/TUV/CE	5.5 x 6.0 x 3.5	3.5	49.95	44.95	39.95
201427CP	Xtreme Power	EPA250	250	+3.3/16, +5/25, +12/10, +5VS B/2, -5/1, -12/1	115/230 @ 47-63 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV/CE	5.5 x 5.4 x 3.4	5.0	27.95	24.95	22.95
152194CP	American Media	JE2031	250	+3.3/14, +5/25, +12/10, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	6.0 x 5.5 x 3.4	3.5	49.95	44.99	40.49
152514CP	High Power	JE8250	250	+3.3/16, +5/25, +12/10, +5VSB/1.5, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	ATX	UL/CSA/TUV	5.5 x 5.9 x 3.4	3.3	44.95	39.95	36.39
196437CP	Hipro	HP235NLXAK	235	+3.3/14, +5/25, +12/8, +5VSB/0.1, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	ATX	UL/CSA/TUV/CE	5.5 x 5.9 x 3.2	3.2	24.95	17.95	12.25
196111CP	SPI	FSP23560GT	235	+3.3/14, +5/22, +12/8, +5VSB/0.8, -5/0.3, -12/0.8	100/240 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	ATX	UL/CUL/TUV/CE	5.6 x 5.9 x 3.4	3.2	34.95	26.25	18.35
202788CP	Enhance	SFX2015	150	+3.3/7, +5/12, +12/5, +5VSB/0.8, -5/0.2, -12/0.3	115/240 @ 47-63 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	ATX	UL/CUL/TUV/CE	5.9 x 3.6 x 3.4	2.1	34.95	23.59	19.79
196189CP	Emaos	MPW-6150F*	150	+3.3/6, +5/10, +12/6, +5VSB/0.72, -5/0.2, -12/1	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	ATX	UL/CUL/TUV/CE	7.5 x 4.0 x 1.6	2.5	34.95	31.49	27.95
177535CP	Trimag	BM5200	200	+5/19.8, +12/7.3, +5VSB/0.8, -5/0.2, -12/0.3	115/240 @ 47-63 switchable	3-prong AC receptacle with 6' power cord	XT/AT	UL	8.7 x 5.6 x 4.7	5.5	39.95	29.95	22.45
205639CP	Sunpower	SQ-3005	300	+5/30, +12/12, -5/0.5, -12/0.5	115/230 @ 50-60 auto switching	3-prong AC receptacle with 6' power cord	IBM AT	UL/CSA/VDE	5.6 x 5.9 x 3.4	4.1	59.95	53.95	48.95
132185CP	APS	JE1035	300	+3.3/28, +5/30, +12/10, -5/1, -12/1	110/220 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	IBM AT	UL/CSA/TUV	5.5 x 5.9 x 3.4	4.7	109.95	99.95	89.95
196728CP	L & C	LC300ATX	300	+3.3/14, +5/25, +12/10, +5VSB/1, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	IBM AT	UL/CSA/TUV/CE	6.0 x 5.5 x 3.4	2.5	25.75	23.19	20.85
203609CP	Manpower	PP-250V	250	+5/25, +12/10, -5/0.3, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	IBM AT	UL/CSA/TUV/CE	5.6 x 5.9 x 3.4	3.8	49.95	44.95	39.95
190123CP	Golden Systems	GPC200-5000	200	+3.3/20, +5/20, +12/8, -5/0.5, -12/0.5	115-230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	IBM AT	UL/CUL/TUV	5.5 x 5.9x 3.7	4.2	9.95	8.95	7.95
190094CP	Delta	DPS200PB	200	+3.3/20, +5/20, +12/8, -5/0.5, -12/0.5	100-240 @ 50-60	3-prong AC receptacle (P/N 38050CP, pg 47)	IBM AT	UL/CSA/TUV	5.5 x 5.9 x 3.4	3.2	19.95	14.95	10.95
189704CP	Astec	SA1453490	145	+5/18, +12/6, -5/0.3, -12/0.8	100-240 @ 50-60	3-prong AC receptacle (P/N 38050CP, pg 47)	IBM AT	UL/CSA/VDE/CE	5.9 x 5.5 x 3.4	2.3	29.95	26.95	23.95
201443CP	Etasis	EPR2251*	250/250 Dual	+3.3/15, +5/30, +12/14, +5VSB/1.5, -5/0.5, -12/1	90-264 @ 47-63 auto ranging	3-prong AC receptacle with 6' power cord	AT	UL/CUL/TUV/CE	7.0 x 3.4 x 9.0	2.6	136.85	124.39	113.49
174465CP	Logic Concept	LC250C	250	+5/20, +12/10, -5/0.5, -12/0.5	110/220 @ 50-67 switchable	3-prong AC receptacle with 6' power cord	AT	UL/CSA/TUV/CE	5.5 x 5.9 x 3.4	2.0	49.95	44.95	39.95
200694CP	Compaq	DPS-200PB-38	200	+5/22, +12/7, -5/0.15, -12/0.15	110/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	AT	UL/CSA/TUV	5.5 x 5.9 x 3.5	2.8	39.95	29.95	22.95
172822CP	Mean Well	AA-230*	200	+5/20, +12/8, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle with 6' power cord	AT	CSA/TUV/CE	6.0 x 4.6 x 3.4	2.6	44.95	39.95	35.95
190115CP	API	API-3186S	200	+3.3/20, +5/20, +12/8, -5/0.5, -12/0.5	115/230 @ 50-60 switchable	3-prong AC receptacle (P/N 38050CP, pg 47)	STD AT	UL/CSA/TUV	5.5 x 5.9 x 3.7	3.5	9.59	8.69	7.79
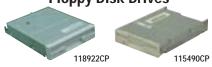
* See photo above

30-Day Money-Back Guarantee   If you're not satisfied we'll take it back! Details on page 201.

1.44MB 3.5" Internal Floppy Disk Drives

118922CP **115490CP**

- IBM PC/XT and higher compatibles
- Compatible with DOS versions 3.3 or higher
- Automatically determines if disk is high or low density • Weight: 1.4 lbs.
- Size: 4.0"W x 5.9"D x 1.0"H (actual drive size)

SALE

Part No.	Mfr. Cross Ref. No.	Mfr.	Color	1	10
118922CP	MPF520-1	Sony	Beige ..	$29.95	$26.95
115490CP	FD235	TEAC	Beige ...	21.95	19.95
189000CP	D35973	Mits.	Black ...	17.95	15.95
189173CP	DF354H011A	Alps	White ...	15.95	13.95
189165CP	—	Varies	Beige	9.95	8.95
189350CP	—	Varies	Black	6.75	6.15
200686CP	—	Varies	(No Bezel) ..	6.95	5.95

3.5" Drive Mounting Kit

- For mounting a 3.5" floppy drive into a 5.25" slot

Includes: Beige faceplate

Part No.	Description	1	10	50
32088CP	Drive mounting kit ...	$7.69	$6.95	$6.25

SONY® Triple Density 3.5" Internal Floppy Disk Drive

Without Bezel

- Supports 1MB, 1.6MB and 2MB unformatted capacities
- Size: 4.0"W x 5.9"D x 1.0"H
- Weight: 0.8 lbs.

SALE

Part No.	Product No.	Manufacturer	1	10
176284CP	MPF520-7	Sony	$5.99	$5.49

Panasonic® & SONY® Floppy Disk Drives

- 1.44MB capacity

154608CP: Panasonic
- Compatible with late model Quadras, all Power PCs and G3s
- Size: 5.7"L x 4.0"W x 1.0"H

154579CP: Sony
- Compatible with Mac-II series, SE30 and early Quadras (700, 900, 950)
- Size: 5.8"L x 3.8"W x 1.0"H

154608CP

SALE

Part No.	Description	Wt. (lbs.)	1	10	25
154608CP	Manual insert	1.2	$19.55	$17.79	$16.19
154579CP	Auto insert	1.7 ...	34.45	31.15	27.95

Over 99% of our products are in stock.

We'll Send It Today!

Just place your order by 6PM EST for same day shipment.
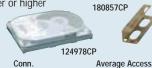
IDE, EIDE & SCSI Hard Drives and Mounting Kits

PC/XT/AT and Compatibles

- IDE drives over 528MB require EIDE controller or higher
- Manufacturers may vary and capacity may exceed specification; we carry Seagate, Western Digital, IBM and others.
- All are 1" in height, except as noted

Check out our external mass storage cabinets on page 163!

180857CP **124978CP** **117217CP**

SALE

Part No.	Capacity	Description	Conn. Pins	Wt. (lbs.)	Average Access Time (ms)	Warranty	1	10
200803CP	17.2GB	3.5" IDE	40	1.1	9.5	3 mos. ...	$99.95	$94.95
200678CP	15.0GB	3.5" IDE	40	1.1	9.5	3 mos. ...	114.95	99.95
200660CP	13.0GB	3.5" IDE (ATA-4)	40	1.1	9.5	3 mos. ...	144.95	129.95
200651CP	10.2GB	3.5" IDE	40	1.1	9.5	3 mos. ...	139.95	125.95
162261CP	8.45GB	3.5" EIDE (Ultra DMA33)	40	1.2	9.5	1 year ...	139.95	125.95
151052CP	6.4GB	3.5" EIDE (Ultra DMA33)	40	1.1	9.5	1 year ...	129.95	116.95
151044CP	4.3GB	3.5" EIDE (Ultra DMA33)	40	1.1	11.5	1 year ...	119.95	109.95
151036CP	3.2GB	3.5" EIDE (Ultra DMA33)	40	1.1	11	1 year ...	114.95	105.95
146333CP	2.5GB	3.5" EIDE (Fast ATA-2)	40	1.0	11	1 year	99.95	69.95
146325CP	1.7GB	3.5" IDE (Fast ATA-2)	40	1.1	12	1 year	99.95	89.95
124978CP	1.27GB	3.5" IDE	40	1.1	14	1 year	79.95	71.95
118949CP	850MB	3.5" IDE	40	1.7	14	1 year	84.95	75.95
115764CP	425MB	3.5" IDE	40	1.7	12.5	3 mos.	79.95	71.95
189914CP	9.1GB	SCSI (wide, ultra, SCA)	80	1.4	5.0	3 mos. ..	102.55	92.29
188907CP	4.0GB	SCSI (wide, ultra, SCA)	80	1.2	8.1	3 mos.	64.95	58.39
190019CP	2.0GB	SCSI (wide, ultra, SCA)	80	1.1	7.2	3 mos.	15.49	13.95
189093CP	2.0GB	SCSI (1.5")	50	1.2	10.1	3 mos.	39.95	35.99
199494CP	2.0GB	SCSI (wide, fast) (1.5")	68	1.2	8.0	3 mos.	19.95	17.99
197579CP	4.0GB	SCSI (Fast SCSI-II) (1.5")	50	1.3	8.0	3 mos.	69.95	62.99
189085CP	1.0GB	SCSI	50	1.3	9.6	3 mos.	39.95	35.95

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	10	25
180857CP	HDB35	3.5" hard drive mount kit (short)	0.2	$4.95	$3.75	$2.65
117217CP	HDMK	3.5" kit (w/ black & gray faceplates)	0.6	7.95	7.25	6.49

Internal CD-R/RW Drive

Floppy disks & ZIP disks do not have enough space for files in today's technology. With files bigger than 1MB there is not enough space for audio files, video files, and photos. With this intenal CD-R/RW you can save your files with capacities of up to 760MB on a single CD.

- Standard EIDE/ATAPI interface
- Supports Ultra DMA/33 • 5.25" half-height design

System requirements: PC486/33 or higher, 8MB of RAM, Windows® 95/98/ME/NT4.0/2000
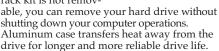
Includes: Installation guide, CD-R & CD-RW disks, audio cable, mounting screws & CD-ROM drivers

Part No.	Description	Wt. (lbs.)	1	5
213209CP	32x12x48x	2.7	$84.95	$79.95

Aluminum IDE Removable Hard Drive Rack with Fan

NEW

Easily remove a hard drive from your PC or workstation, safeguard your data and an ideal way to back-up data. Because rack kit is hot removable, you can remove your hard drive without shutting down your computer operations. Aluminum case transfers heat away from the drive for longer and more reliable drive life.
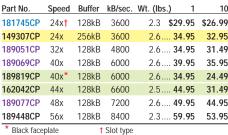
- 5.25" rack kit for 3.5" hard drives • Drive activity LED
- Built-in fan • Aluminum rack • Keylock for security

Part No.	Description	1	10	25
211035CP	Rack kit (IDE)	$29.95	$26.95	$23.95

Internal IDE CD-ROM Drives

- 5.25" half-height design
- One-year warranty
- Manufacturer varies

Includes: Audio cable

189819CP

Part No.	Speed	Buffer	kB/sec.	Wt. (lbs.)	1	10
181745CP	24x†	128kB	3600	2.3	$29.95	$26.99
149307CP	24x	256kB	3600	2.6....	34.95	32.95
189051CP	32x	128kB	4800	2.6....	34.95	31.49
189069CP	40x	128kB	6000	2.6....	39.95	35.95
189819CP	40x*	128kB	6000	2.6....	34.95	24.49
162042CP	44x	128kB	6600	2.5....	44.95	31.49
189077CP	48x	128kB	7200	2.6....	49.95	44.95
189448CP	56x	128kB	8400	2.3....	59.95	53.95

* Black faceplate   † Slot type

Drive Mounting Rails

SALE

- AT and compatibles • 8 mounting holes

Includes: All necessary mounting hardware

Part No.	Description	1	10	100
34323CP	Mounting rails (2)	$.27	$.25	$.23

External CD-ROM Case

- SCSI-I interface
- SCSI-ID address selector
- Streamlined appearance
- RCA jack
- Metal body with plastic front panel
- 50-watt universal switching power supply
- Size: 6.5"W x 11.8"D x 2.0"H • Weight: 3.8 lbs.
- Use cable (P/N 73162CP, pg 158) for connections

Part No.	Description	1	10
126391CP	SCSI CD-ROM ext. case	$49.95	$44.95

6" PC Power Supply Extension Cable Set

- Two 6", 6-conductor cables
- Use with standard IBM compatible power supplies and motherboards
- Wiring: 18 AWG, 300V rating
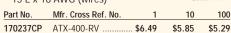
SALE

Part No.	Description	1	10	100
130809CP	Extension cable set ...	$3.35	$3.15	$2.79

ATX Power Supply 15" Extension Cable

- For use with ATX power supplies
- 20-pin ATX male and female connectors
- Color coded to ATX power supply code
- 15"L x 18 AWG (wires)

Part No.	Mfr. Cross Ref. No.	1	10	100
170237CP	ATX-400-RV	$6.49	$5.85	$5.29

Internal Computer Ribbon Cables

185068CP (3½ Floppy)

32686CP (IDE)

185076CP (IDE)

SALE

Part No.	Conductors	Length	1	10	100
185068CP	34	9.0"	$2.95	$2.25	$1.55
185076CP	40	14.0"	.79	.69	.59
32686CP	40	18.0"	3.95	3.49	2.95

Disk Drive Cables

185084CP   32918CP   72805CP   175492CP

Part No.	Description	Cable Length	1	10	100
185084CP	34-pin header socket ribbon cable for floppy drive	25"	$1.19	$.89	$.65
32918CP	34-pin header socket ribbon cable for floppy to card	23"	3.49	2.65	1.85
72805CP	Two 40-pin header socket ribbon cable for IDE drive	18"	3.69	3.09	2.19
179987CP	One 40-pin and one 34-pin cable kit	20"/25"	.55	.49	.45
175492CP	40-pin header socket ribbon cable for ultra DMA66/100	17"	6.95	6.25	5.49

Internal and External SCSI Cables for Complete Connectivity

32715CP   72848CP   137550CP   73162CP   137568CP

- For PC/XT/AT and compatibles   • All lines connected

SALE

Part No.	Description	1	10	100
32715CP	50-pin header socket ribbon cable SCSI-I (18")	$3.95	$3.49	$2.95
72848CP	50-pin header socket ribbon cable SCSI-I (24")†	3.49	2.95	2.49
137550CP	68-pin header internal ribbon cable SCSI-III (27")	17.95	15.95	14.49
189641CP	68-pin header internal ribbon cable with term SCSI-III (42")	6.15	5.59	5.19
180507CP	Male 50-pin Centronics to male DB25 (SCSI-I) 5.5'	3.49	3.15	2.79
164769CP	Male 50-pin Centronics to male 50-pin Centronics SCSI-I to SCSI-I (3')†	3.89	3.55	3.25
73162CP	Male 50-pin Centronics to male 50-pin Centronics SCSI-I to SCSI-I (6')†	6.95	5.19	3.65
118084CP	Male 50-pin Centronics to male HPDB50 cable SCSI-I to SCSI-II (6')	14.95	13.49	11.95
118914CP	Male HPDB50 to male HPDB50 SCSI-II to SCSI-II (3')	14.95	13.49	11.95
118076CP	Male HPDB50 to male HPDB50 SCSI-II to SCSI-II (6')	17.95	15.95	13.95
137576CP	Male HPDB68-pin to male 50-pin Centronics SCSI-III to SCSI-I (3')	19.95	17.99	16.19
137568CP	Male HPDB68-pin to male HPDB50-pin SCSI-III to SCSI-II (3')	12.95	11.49	9.95

† Also Macintosh® compatibles, see right for SCSI type connector guide

3.5" Disk Drive Power Adapter Cable

- IBM PC/XT and higher compatibles
- Allows connection of standard 3.5" disk drives to power supplies

Part No.	Length	AWG	1	10	100
28396CP	3.5"	22	$2.49	$2.25	$1.95

3.5" & 5.25" Disk Drive Power Splitters

- IBM PC/XT and higher compatibles
- Splits 4-line Molex male into 2 females

28353CP

Part No.	Drive	AWG	Length	1	10	100
28353CP	5.25"	18	5"	$2.95	$2.39	$1.79
72303CP	3.5"	22	5"	2.75	2.49	2.19

CD-ROM Audio Cables

127546CP   201558CP   168612CP

- 2 x 28 AWG
- **127546CP/201558CP:** • Compatible w/ most CD-ROMs
- **168612CP:** • 3 connectors on each end of wire:
  - 4-position (.100") housing connector;
  - 4-position (.100") Molex-type keyed connector;
  - 3-position (.100") Molex-type keyed connector
- Use with Creative Labs, Sony or generic sound cards
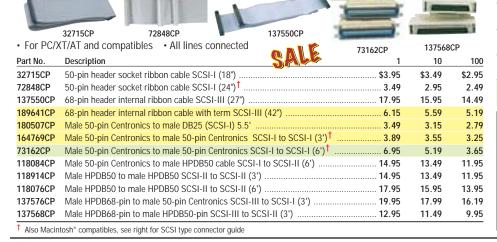
Part No.	Connection from Sound Blaster to	Length	1	10	50
127546CP	Sony/MPC2	25"	$2.95	$2.65	$2.29
201558CP	Sony/MPC2	18"	4.99	3.99	3.29
168612CP	Universal	18"	4.95	3.99	3.29

Ribbon Cable Assemblies

- Metal connector
- 300V rating   • 105°C rating
- 28 AWG flat cable
- Tin-plated contacts

12407CP

Part No.	Description	1	10	100
12407CP	4' DB25 M-F	$4.49	$3.95	$3.59
208581CP	6' DB9 M-F	3.95	3.55	3.19
208590CP	6' DB25 M-M	4.95	4.45	3.95
208602CP	6' DB25 F-F	4.95	4.45	3.95

Computer Card Brackets

Fig.:   1   2   3   4   5

- For securing cards into bus slots
- Fits standard PC/XT/AT cases   • Length: 4.75"
- See pg 126 for DB connectors

Part No.	Description	Fig.	1	10	100
11754CP	Blank back panel	1	$1.89	$1.75	$1.55
101717CP	For DB9 connector	2	1.55	1.45	1.29
101733CP	For DB25 connector	3	1.55	1.45	1.29
101741CP	For DC37 connector	4	1.55	1.45	1.29
101830CP	For DB9/DB25 conn.	5	1.99	1.79	1.59

Panel Bracket Cable Assemblies

- Standard computer back panel brackets
- Length: 12"
- Ribbon cable with header connector

149614CP

149622CP

149614CP: 2 serial ports
149622CP: 1 parallel port
179995CP: 1 parallel & 2 serial ports

Part No.	Description	1	10	25
149614CP	DB9M to 10-pin header DB25M to 10-pin header	$4.95	$4.49	$3.49
149622CP	DB25 to 26-pin header	4.95	4.49	3.59
179995CP	DB9M to 10-pin header DB25M to 10-pin header DB25F to 26-pin header	1.19	1.09	.99

SCSI Adapters

133920CP   167370CP

- See above for SCSI-type connector guide

Part No.	Description	1	10	50
133920CP	50-pin ribbon header SCSI-I to DB25 female	$8.95	$7.95	$7.25
125241CP	50-pin ribbon header to HPDB50 SCSI-II female	9.95	8.95	7.95
145293CP	DB25 male to HPDB50 female SCSI-II	15.95	14.35	12.95
167370CP	DB25 female to HPDB50 male SCSI-II	9.95	7.49	5.25

SCSI Type / Connector Reference Table

SCSI type	DB25	50-pin Centronics	50-pin Header	Half pitch DB50	Half pitch DB68	VHD68 Centronics	VHD80 Centronics
SCSI-I	✔	✔	✔				
SCSI-II			✔	✔			
SCSI-II wide					✔		
SCSI-III					✔	✔	
RAID: SCA, SCA-2							✔

ISA Fast SCSI-II Controller

- Compatible with DOS, Windows®, Windows® NT, Windows® 95, OS2 Netware, and SCO Unix
- Internal and external SCSI-II connectors
- Size: 6.3"L x 2.9"W   • Weight: 0.6 lbs.
- One-year warranty
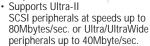
Includes: Setting sheet, ribbon cable, and software (3.5" disk)

Part No.	Description	1	10
149294CP	ISA SCSI-II controller	$44.95	$39.95
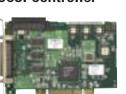
PCI Ultra-II SCSI Controller

- AIC-7890AB chipset
- Windows® 95/NT, NetWare, OS/2 compatible
- Plug & Play design
- Internal and external Ultra-II SCSI 68-pin connectors
- Supports Ultra-II SCSI peripherals at speeds up to 80Mbytes/sec. or Ultra/UltraWide peripherals up to 40Mbyte/sec.
- Supports up to 15 SCSI peripherals
- Size: 6.0"L x 3.5"W   • Weight: 0.3 lbs.

SALE

Part No.	Description	1	10
191513CP	Ultra-II SCSI	$105.49	$94.95

Corporate Customers

Opening an account is easy!!
Call 1-800-831-4242
for details today!

ISA IDE Super 16-Bit I/O Plus

Supports 2 IDE and 2 Floppy Drives

- Parallel printer port interface (P/N 131318 is bidirectional)
- Game port
- Two RS-232 serial ports
- UART emulation: **67061CP:** 16450; **131318CP:** 16550
- Weight: 0.9 lbs.   • One-year warranty

131318CP

Includes: Manual and cables

Part No.	Description	1	10
67061CP	16450 UART I/O	$14.95	$11.25
131318CP	16550 UART I/O	29.95	26.95

ISA EIDE Super I/O Controller

- Supports 4 EIDE devices (HD, CD-ROM, tape drive), 2 floppy drives, 2 parallel ports, SPP/EPP/ECP, 2 serial ports, 16550 compatible, 1 game port
- Compatible with DOS 6.2, Windows® 3.1, Windows® Workgroups 3.11, OS/2 and Netware 3.1x, 4.01
- Intelligent ROM BIOS auto-configures EIDE ports
- Size: 6.5"L x 4.0"W   • Weight: 1.1 lbs.
- One-year warranty

Includes: Manual and cables

Part No.	Description	1	10
138624CP	ISA-EIDE controller	$43.35	$38.99

PCI Ultra ATA/133 Controller Card

Supports IDE devices to transfer data at maximum burst rate of 133Mbytes/sec. Backward compatible with all ATA/66 and ATA/100 IDE devices.

- Supports 4 IDE devices
- 133Mbytes/sec burst data rate on PCI local bus and IDE bus   • Enhanced BIOS on board
- Widest range of compatible IDE/ATAPI devices
- Supports Windows® 98/ME/NT4.0
- Size: 5.2"L x 2.5"W

Includes: 80-wire/40-pin cable, 3.5" drivers & manual

Part No.	Description	1	10
208021CP	Ultra ATA/133 controller	$49.95	$47.45

ISA Controller Card

- 16-bit data transfer which is fully compatible with IBM PC/AT interface
- Supports two floppy disk drives (360k, 720k, 1.2Mb, 1.44Mb)
- Controls two "AT BUS" hard disk drives
- High bandwidth host interface works up to 16MHz host I/I clock   • Size: 5.5"L x 2.1"W

Part No.	Description	1	10
206316CP	ISA controller card	$19.95	$17.95

External Zip Drive NiMH Battery Pack

iomega

- Powers your external zip drive for up to 3 hours
- 6V @ 1A-h
- Built-in charging; plugs directly to wall outlet (2-prong plug)
- Size: 4.5"L x 3.4"W x 1.0"H

Part No.	Description	1	10
190166CP	External battery pack	$15.59	$13.99

50 Pack CD-R

- 24x 80 minutes 700MB 50 pack CD-R
- Weight: 2.0 lbs.

Part No.	Description	1	10
198774CP	50-pack CD-R (700MB)	$11.95	$10.75

CD Accessories

208485CP
208493CP
208506CP
76591CP
208514CP

Part No.	Description	1	10	100
172179CP	Single jewel case	$.40	$.32	$.26
208514CP	Paper envelope 25 pk. ...	2.49	2.19	1.99
208506CP	Clamshell case 10 pk. ...	3.99	3.59	3.19
208485CP	Slim black 10 pk.	3.99	3.59	3.19
208493CP	Slim asst. color 10 pk....	4.95	4.45	3.95
76591CP	Caddy	3.89	3.55	3.25

CDPrint Printer

Introducing the EZ/CDPRINT, the first printer that delivers a low-cost way to create professionally printed CD-R's, Credit Card CD-R's, CD Jewel case liner notes and standard color paper documents. Don't settle for unsightly felt pen scribbles or hard-to-use labels on your CD's. Now print full color images, photos, and text directly on your CD in less than a minute. EZ/CDPRINT is ideal for amateur musicians, family photos, school projects, customer presentations, interactive training or anywhere an extra edge of professional presentation counts.

- Prints a full color CD in about a minute
- Compatible with all inkjet printable CD-R & DVD-Rs
- Special PC and Mac software and templates to print CD, liner notes and more
- Both USB and parallel port connections   • Uses standard C60/C62 Epson inkjet cartridges
- Prints paper documents at 12ppm monochrome & 7ppm color   • Printer size: 18.0"W x 8.0"D x 7.0"H

213381CP
213372CP
213410CP
213401CP

Home Photos
Impress your friends

No more messy handwritten CD's

Business
Expensive manuals can now be replaced with interactive, low-cost professional looking CD's.

Requires: Windows® 95/98/2000/ME/XP, Mac OS 8.1 or higher operating systems

Includes: Printer, PC and Mac printer and template software, three printable disks

Part No.	Description	1	5
213372CP	CD printer	$358.95	$338.95
213381CP	50 pk. 40x 700MB 80 min. CD-R	24.95	23.69
213410CP	Black C60/C62 ink cartridge	29.95	29.95
213401CP	Color C60/C62 ink cartridge	29.95	29.95

Color Code Legend
New Sale Qty Save Closeout

RGB Video Cables

- 75Ω coaxial cable; 6' or 10'
- Pin 1 red, pin 2 green, pin 3 blue, pin 14 white/black vertical, pin 13 gray horizontal
- 5 BNCs to HDDB15-pin male
- Weight: 0.9 lbs.

73648CP
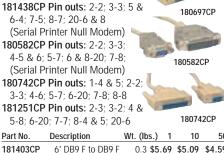
Part No.	Description	1	10	25
73648CP	6' cable (black)	$19.95	$17.95	$16.15
118068CP	10' cable (black)	31.95	28.95	21.95

Serial Null Modem Cables

- Molded type connectors • Color: gray
- **181403CP/180697CP** Pin outs: 1–7 & 8; 2-3; 3-2; 4-6; 5-5; 6-4; 7 & 8-1
- **181438CP** Pin outs: 2-2; 3-3; 5 & 6-4; 7-5; 8-7; 20-6 & 8 (Serial Printer Null Modem)
- **180582CP** Pin outs: 2-2; 3-3; 4-5 & 6; 5-7; 6 & 8-20; 7-8; (Serial Printer Null Modem)
- **180742CP** Pin outs: 1-4 & 5; 2-2; 3-3; 4-6; 5-7; 6-20; 7-8; 8-8
- **181251CP** Pin outs: 2-3; 3-2; 4 & 5-8; 6-20; 7-7; 8-4 & 5; 20-6

180697CP

180582CP

180742CP

Part No.	Description	Wt. (lbs.)	1	10	50
181403CP	6' DB9 F to DB9 F	0.3	$5.69	$5.09	$4.59
180697CP	10' DB9 F to DB9 F	0.4	6.79	6.09	5.49
181438CP	6' DB25 M to DB9 F	0.4	4.95	4.49	3.95
180582CP	10' DB25 M to DB9 F	0.4	6.69	6.05	5.45
180742CP	10' DB25 F to DB9 F	0.5	6.49	5.85	5.29
181251CP	25' DB25 M to DB25 F	1.2	.35	.29	.25

VGA Monitor Cables

- Connects video card to VGA monitor
- IBM PC/XT and higher compatibles
- HDDB15 male to male

66173CP

Part No.	Description	1	10	100
66173CP	6' monitor cable	$6.49	$5.89	$5.29
148523CP	10' monitor cable	6.95	6.25	5.59

9-Pin Monitor Cable

- For monochrome, RGB, EGA and multisync monitors
- Connects video card to monitor
- IBM PC/XT and higher compatibles

Part No.	Description	1	10	100
66157CP	6' DB9 M-M	$4.45	$3.95	$3.55

VGA Monitor Extension Cables

- Extends VGA monitor cable; HDDB15 male-to-female
- IBM PC/XT and higher compatibles
- **134041CP:** • HDDB15 female with hex nuts and HDDB15 male with thumbscrews
- **66165CP/148531CP:** • Thumbscrews on each end

134041CP **66165CP**

Part No.	Description	1	10	100
134041CP	6' screws/hex nuts	$4.49	$3.95	$3.49
66165CP	6' thumbscrews	6.59	5.95	5.35
148531CP	10' thumbscrews	7.49	6.79	5.99

DA15 Extension Cables

- Molded connectors
- Straight through
- Thumbscrews
- Color: gray

181286CP

Part No.	Description	Length	1	10	100
181286CP	DA15 M-M	6'	$5.49	$4.95	$4.45
181358CP	DA15 M-F	6'	5.49	4.95	4.45

DB25 Serial Modem Cable

- Molded and fully shielded DB25 M-F
- 9 pins wired straight through: pins 1-8 and 20 (metal shell)

Part No.	Description	1	10	100
53858CP	6' M-F	$4.49	$3.39	$2.39

DB25-to-Centronics Parallel Printer Cables

- Molded and fully shielded DB25 male and 36-pin Centronics male connectors
- IBM PC/XT and higher compatibles

28716CP

164777CP
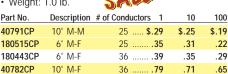
Part No.	Description	Wt. (lbs.)	1	10	100
28716CP	6' straight	0.4	$4.69	$4.25	$3.85
123781CP	10' straight	0.6	5.95	4.49	3.15
164777CP	10' right angle*	0.7	5.49	4.15	2.89
28708CP	15' straight	0.8	5.95	4.49	3.19
101899CP	25' straight	1.1	5.95	4.49	3.19
184786CP	50' straight	2.1	3.95	3.55	3.19

* Centronics right angle

36-Pin Centronics Printer Extension Cables

25 or 36 Conductors

- Molded and fully shielded Centronics 36-pin male and female connectors
- Use to lengthen standard printer cables or for switch box applications
- Weight: 1.0 lb.

40782CP

Part No.	Description	# of Conductors	1	10	100
40791CP	10' M-M	25	$.29	$.25	$.19
180515CP	6' M-F	25	.35	.31	.22
180443CP	6' M-F	36	.39	.35	.29
40782CP	10' M-F	36	.79	.71	.65

37-Pin Straight Through Cable Adapters

180611CP **181294CP**

- Molded connectors • Color: gray • Weight: 0.9 lbs.

Part No.	Description	1	10	100
180611CP	6' DC37 M-M	$6.95	$6.29	$5.65
181294CP	6' DC37 M-F	5.95	5.49	4.95

DB9 Extension Cables

132345CP

25700CP

- All lines connected straight through
  132345CP/196365CP:
- DB9 female to DB9 female cable with thumbscrews
  25700CP/148515CP/199638CP:
- DB9 male to DB9 female cable with thumbscrews
  181665CP: • DB9 male to DB9 male cable

Part No.	Description	1	10	100	1000
132345CP	6' F-F	$4.95	$4.49	$3.95	$3.49
199638CP	6' M-F (black)	4.49	3.95	3.49	2.95
25700CP	6' M-F	4.95	4.49	3.95	3.49
196365CP	10' F-F	6.95	6.25	5.59	4.95
148515CP	10' M-F	7.49	6.79	5.99	4.95
181665CP	10' M-M	6.95	6.25	5.59	4.95

9-Pin Test Cables

154798CP: DB9 M to DB25 M (2')
- Pin outs: 2-2, 3-3, 5-7, 7-5, 8-4
162915CP: DB9 M to DB9 F (6')
- Pin outs: 1-3, 2-2, 4-5

162915CP

Part No.	Description	1	10	100
154798CP	DB9 male to DB25 male	$1.09	$.99	$.89
162915CP	DB9 male to DB9 female	3.49	2.59	1.79

DB9-to-DB25 AT-Adapter Serial Cables

- For DB9 serial ports which need to be converted to DB25 serial
- AT and compatibles
- Molded DB9 female to DB25 male connectors

31721CP

Part No.	Description	1	10	100
109583CP	1' serial, beige	$4.35	$3.95	$3.49
189333CP	3' serial, beige	3.95	2.95	2.09
31721CP	6' serial, beige	3.89	3.55	3.15
191361CP	6' serial, gray	4.95	3.75	2.65
155521CP	10' serial, beige	4.49	3.49	2.49
207790CP	4' serial, beige	4.49	3.95	3.59

DB25 Extension Cables

- All lines connected straight through
- Use to lengthen your standard serial cable or for switch box applications
- Thumbscrews to secure connectors
- Color: gray; except P/Ns 174001CP/175290CP: black*

67256CP
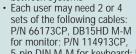
Part No.	Description	Wt. (lbs.)	1	10	100	1000
203060CP	8" M-M	0.3	$1.95	$1.75	$1.55	$1.39
174001CP	3' M-M*	0.6	4.79	4.35	3.89	3.49
65787CP	6' M-M	0.5	6.49	5.89	5.29	4.89
39538CP	10' M-M	0.7	6.95	5.59	4.19	2.95
179979CP	15' M-M	1.2	6.95	5.49	4.14	2.90
67070CP	25' M-M	1.4	10.95	9.95	8.95	7.95
180435CP	50' M-M	3.6	14.95	13.49	11.95	9.95
175329CP	1' M-F	0.3	3.39	3.05	2.75	2.45
164291CP	3' M-F	0.4	4.29	3.45	2.59	1.85
175290CP	3' M-F*	0.4	2.95	2.39	1.79	1.25
163133CP	6' M-F	0.5	3.95	3.55	3.19	2.89
67256CP	6' M-F	0.6	6.45	5.79	5.25	4.69
39511CP	10' M-F	0.7	6.95	5.59	4.19	2.95
177279CP	15' M-F	1.0	9.49	7.59	5.69	3.99
101995CP	25' M-F	1.4	11.95	9.59	7.19	5.05
181201CP	50' M-F	3.2	17.95	14.39	10.79	7.55
180478CP	6' F-F	0.7	4.95	4.49	3.75	3.25
181331CP	10' F-F	0.9	5.95	4.79	3.59	2.51

Jameco Special Values!

See the yellow and green highlighted items.   Details on page 4.

2-Way & 4-Way Monitor/Keyboard/Mouse-to-PC Switch Boxes

HDDB15/5-Pin DIN/DB9M

- Allows 2 or 4 users to share one PC system
- Internal diodes maintain keyboard in powered state when switching between systems
- Each user may need 2 or 4 sets of the following cables: P/N 66173CP, DB15HD M-M for monitor; P/N 114913CP, 5-pin DIN M-M for keyboard; P/N 132345CP, DB9 F-F for serial mouse (cables, pgs 160 - 161)
- Size: 7.5"L x 5.3"W x 2.8"H

132249CP

134017CP

Part No.	Description	Wt. (lbs.)	1	10
132249CP	2-user switch box	1.6	$17.95	$15.95
134017CP	4-user switch box	2.3	21.95	19.95

Keyboard/Monitor-to-PC Switch Box

HDDB15/5-Pin DIN Female

- 2-way switch box
- For 2 PCs connected to 1 keyboard and 1 monitor – diodes maintain keyboard in powered state
- Size: 6.0"L x 4.0"W x 2.3"H
- Weight: 1.3 lbs.

Part No.	Description	1	10
114155CP	2 computers	$14.95	$13.49

Keyboard/Monitor-to-PC Switch Box

HDDB15/6-Pin Mini DIN Female

- Connects 2 monitors and 2 keyboards to a PC
- Size: 6.0"L x 4.5"W x 2.6"H
- Weight: 1.3 lbs.

Part No.	Description	1	10
79177CP	2-way switch box	$16.95	$15.25

Serial Port-to-PC Switch Boxes

DB9 Female

- Connects 2 or 4 serial ports to a PC

79126CP

79126CP: 2-serial port switch box
- Size: 6.0"L x 4.8"W x 2.5"H
- Weight: 1.2 lbs.

183417CP: 4-serial port switch box
- Size: 6.1"L x 4.0"W x 2.2"H
- Weight: 1.3 lbs.

183417CP

Part No.	Description	1	10
79126CP	2-serial port switch box	$9.95	$8.95
183417CP	4-serial port switch box	19.95	17.95

Network Devices-to-Server Switch Box

RJ45 8P8C Female

- Connects network devices to 4 servers
- 5 RJ45 8P8C females
- Size: 8.0"L x 6.1"W x 2.2"H
- Weight: 2.0 lbs.

Part No.	Description	1	10
180099CP	4-server RJ45 switch box	$16.95	$15.25

Fax/Modem/Telephone-to-PC

RJ11 6P6C Female

- Connects fax, modem, or telephone to 2 or 4 PCs

79142CP

79142CP: 2-PC switch box
- Size: 6.0"L x 4.8"W x 2.5"H
- Weight: 1.2 lbs.

180161CP: 4-PC switch box
- Size: 8.0"L x 6.0"W x 2.2"H
- Weight: 2.0 lbs.

SALE

180161CP

Part No.	Description	1	10
79142CP	2-PC RJ11 switch box	$9.95	$8.95
180161CP	4-PC RJ11 switch box	13.95	12.59

Parallel Printer-to-PC Switch Boxes

DB25 Female

- Connects 2 or 4 PCs to one printer

20095CP: 2-PC switch box
- Size: 6.0"L x 5.8"W x 2.3"H
- Weight: 1.3 lbs.

20095CP

155512CP: 2-PC switch box
- Size: 7.2"L x 4.9"W x 2.5"H
- Weight: 2.3 lbs.

Includes: DB25 M-M cable

155512CP

20124CP: 4-PC switch box
- Size: 6.0"L x 4.0"W x 2.4"H
- Weight: 1.5 lbs.

20124CP

Part No.	Description	1	10
20095CP	2 PC switch box	$8.95	$7.95
155512CP	2 PC switch box	6.49	5.85
20124CP	4 PC switch box	14.95	13.49

Monitor/Mouse/Keyboard Cables

- 6' or 32'
- HDDB15 male/female for monitor, 5-pin DIN male/female for keyboard, and DB9 male/female for mouse

141284CP

Part No.	Description	Wt. (lbs.)	1	10
141284CP	6' cable	1.6	$22.95	$19.95
141276CP	32' cable	4.8	39.95	35.95
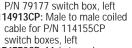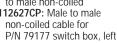
Switch Box Adapter Cables

177261CP: Male to male non-coiled cable for P/N 79177 switch box, left
114913CP: Male to male coiled cable for P/N 114155CP switch boxes, left
174772CP: Male to male
174908CP/205655CP: Male to male non-coiled
112627CP: Male to male non-coiled cable for P/N 79177 switch box, left

174772CP

205655CP

Part No.	Description	Length	1	10	50
177261CP	6-pin mini DIN	2' (gray)	$2.95	$2.25	$1.59
114913CP	5-pin DIN	5' (gray)	4.95	4.49	3.95
174772CP	6-pin mini DIN	6' (black)	4.95	3.69	2.59
174908CP	6-pin mini DIN	6' (gray)	5.75	5.15	4.65
112627CP	6-pin mini DIN	10' (beige)	7.95	7.25	6.49
205655CP	6-pin mini DIN	25' (beige)	8.95	7.95	6.95

PC/XT/AT & PS/2 Keyboard Extension Cables

- Color: beige

22234CP/114981CP/112045CP169826CP:
- 5-pin DIN male-to-female

28548CP/111053CP:
- 6-pin mini DIN female-to-male

SALE

114981CP

Part No.	Description	1	10	100
22234CP	PC/XT/AT 5' coiled	$1.05	$.95	$.85
114981CP	PC/XT/AT 6' non-coiled	3.85	3.45	3.09
169826CP	PC/XT/AT 10' coiled	.99	.89	.79
112045CP	PC/XT/AT 10' non-coiled	3.95	2.95	2.09
28548CP	PS/2 6' non-coiled	4.35	3.89	3.49
111053CP	PS/2 10' non-coiled	5.49	4.99	4.39

AT-to-PS/2 and PS/2-to-AT Keyboard Adapter Cables

28003CP:
- Connects AT-type keyboards to PS/2
- 5-pin F DIN to 6-pin M mini DIN

28003CP

85500CP:
- Connects PS/2 keyboard to AT
- 6-pin female mini DIN to 5-pin male DIN connectors

Part No.	Length	Color	Wt. (lbs.)	1	10	100
28003CP	6.5"	Beige	0.6	$3.95	$3.49	$3.15
85500CP	11.3"	Beige	0.8	5.39	4.85	4.39

Don't worry about backorders. Over 99% of our products are in stock!

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Computer Accessories

Color Code Legend
New Sale Qty Save Closeout
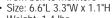
ΛTEN SVGA Monitor Splitters

Duplicate a video signal from one source to monitors up to 210 feet away.

- Suitable for SVGA, VGA and multisync monitors

176866CP: 2-channel
- 1 HDDB15 male connector from PC to box; 2 HDDB15 female connectors from box to monitors
- Size: 6.6"L 3.3"W x 1.1"H
- Weight: 1.4 lbs.

133866CP: 4-channel
- Slide switch for video signal gain control
- Daisy chainable   • One-year warranty
- Size: 8.8"L x 6.0"W x 1.9"H   • Weight: 3.6 lbs.
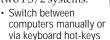
Includes: Power adapter and manual

Part No.	Description	1	10
176866CP	2-channel monitor splitter	$49.95	$44.95
133866CP	4-channel monitor splitter.......	68.95	61.95

Two-PS/2 K/V/M Switch Box

Allows one user with one keyboard, mouse and monitor to access two PS/2 systems.

- Switch between computers manually or via keyboard hot-keys
- Auto scan feature switches between computers
- Small design of switch increases work space
- Input connectors (from PC to switch box): 6-pin mini DIN female (PS/2) for keyboard and mouse, HDDB15 male for monitor   • Weight: 0.9 lbs.
- Output connectors (from switch box to user): 6-pin mini DIN female for keyboard and mouse; HDDB15 female for monitors   • Size: 6.7"L x 3.8"W x 1.4"H

Part No.	Description	1	10
190916CP	2 computer switch box	$69.95	$62.95
204062CP	6' cable	16.95	15.29

2-Port K/V/M Switch Box

This two port K/V/M switch box can access two computers from one keyboard, mouse, and monitor. No interface card or software to configure. Operation is as simple as pushing a button on the front panel and entering hot-key commands.

New

- Supports Microsoft® IntelliMouse, Logitech Net Mouse, etc.
- Supports operating systems DOS, Win 3.x, Win95/98/98SE/2000/ME, WinNT, Netware, Unix, Linux
- High VGA resolution
- Keyboard and mouse pluggable at anytime
- Hot-key function allows easy computer access
- Audible sound for switching port confirmation
- Port and console connectors: female PS/2 keyboard and mouse, female HDDB15 for video
- Size: 4.3"L x 3.0"W x 1.2"H

Part No.	Description	1	10
216063CP	2 port switch box	$69.95	$62.95

ΛTEN K/V/M Switch Boxes for up to 4 Computers

- Selects any computer by hot keys or switch
- Serial and PS/2 mouse & keyboard emulation for automatic PC boot up
- Three stage cascadable for accessing more computers
- Supports SVGA, VGA and Multisync monitors
- Keyboard LED status recorded and restored while switching among computers
- Auto scan for monitoring PC periodically
- One-year warranty
- Size (149382CP): 9.0"L x 6.0"W x 2.0"H (149391CP): 10.0"L x 7.0"W x 3.0"H

Includes: Manual & power supply (9VDC @ 600mA)

149382CP (front)

149382CP (rear)

149391CP (front)

149391CP (rear)

Part No.	Description	Wt. (lbs.)	1	10
149382CP	2 computers	4.0	...... $149.95	$129.95
149391CP	4 computers	7.1	.... 229.95	209.95

Printer Port Extender

- 4-wire phone line transfer of parallel printer data
- Maximum distance: 1300' (396 meters)
- Non-powered
- Transmitter & receiver – DB25M & RJ11 (6P4C) jack
- Maximum data transfer speed: 21kb/sec.
- Size (transmitter & receiver): 3.0"L x 1.9"W x 0.9"H

SALE

Includes: 25 ft. RJ11 cable

Part No.	Description	1	10
183337CP	Printer port (DB25M)	$18.95	$16.95

Monitor/Mouse/ Keyboard Cables

- 6' or 32'
- HDDB15 male/ female for monitor, 5-pin DIN male/ female for keyboard, and DB9 male/ female for mouse

141284CP

Part No.	Description	Wt. (lbs.)	1	10
141284CP	6' cable	1.6	.... $22.95	$19.95
141276CP	32' cable	4.8	.... 39.95	35.95

Bidirectional Non-Buffered Serial-to-Parallel Converter

- Bidirectional conversion of parallel and serial signals
- Serial interface: hardware handshake RTS/CTS, software handshake XON/XOFF; DCE/DTE selectable; parity: odd, even, or no parity; data bits: 7, 8
- Connectors: one DB25 female and one Centronics 36-pin male
- Stop bits: 1 or 2
- Baud rate: 300 to 38,400bps
- Size: 4.0"L x 2.5"W x 1.0"H
- Weight: 0.8 lbs.
- One-year warranty

ΛTEN

Includes: AC adapter (9VAC @ 200mA) and manual

Part No.	Description	1	10	25
116935CP	Bi-converter	$49.95	$44.95	$39.95

IEEE 488 to Centronics Parallel Printer Converter

- Connects an IEEE 488 device to a parallel printer
- IEEE 488 24-pin female input connector
- Centronics 36-pin male output connector
- DIP switch configurable to 31 IEEE 488 addresses
- One-year warranty
- Size: 4.0"L x 2.5"W x 1.0"H   • Weight: 0.9 lbs.

Includes: 9VDC @ 300mA wall transformer

Part No.	Description	1	10
122964CP	IEEE to Centronics convtr.	$54.95	$49.45

4 & 2-Port Auto Printer Switches
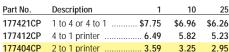
- Connects up to 4 PCs to 1 printer or 4 printers to 1 PC
- Non-powered
- Compact size
- Auto form-feed selectable
- Transparent to user

ΛTEN

177421CP

SALE

177421CP: bidirectional; 3.5" software included; 5 DB25 female connectors

177412CP: 5 DB25 female connectors

177404CP: 3 DB25 female connectors

177404CP

Part No.	Description	1	10	25
177421CP	1 to 4 or 4 to 1	$7.75	$6.96	$6.26
177412CP	4 to 1 printer	6.49	5.82	5.23
177404CP	2 to 1 printer	3.59	3.25	2.95

We'll match the advertised price of any like product.

Jameco's Low-Price Guarantee

It's that simple!

19" Rack Mount Enclosures

Perfect for equipment setup in home, studio or laboratory.

- Ventilation holes on all sides
- Front and back panels are steel w/ aluminum, pre-punched face plates
- Top, bottom, sides durable 0.035" steel
- Front panel: 0.12" Thick   • Black front panel
- All enclosures have handles except P/N 132812CP

Includes: Mounting screws

Part Number	Dimensions (In.) H1	H2	D	Weight (lbs.)	Pricing 1	10
132812CP	1.73	1.25	9.75	6.2	$39.95	$35.99
132821CP	3.46	3.0	9.75	7.9	47.95	43.49
132839CP	3.46	2.88	11.75	9.1	53.95	48.59
132847CP	5.22	4.75	11.75	10.6	54.99	49.49
132855CP	5.22	4.75	13.50	11.8	73.95	66.95
132863CP	8.56	8.0	13.50	15.4	94.95	84.95

19" Industrial Chassis with PC-AT 300-Watt Power Supply

EIA RS-310C Compliant

- Back panel with 12 open slots
- Supports one 3.5" and two 5.25" external accessible bays and two 3.5" internal bays
- Use with 14-slot PC-BUS compatible backplane P/N 135061CP, above right
- Removable disk drive bay w/ shock resistant design
- Front 12VDC cooling fan with removable air filter screen and mesh
- Waterproof front panel
- Color: gray   • Weight: 37 lbs.
- Size: 16.8"L x 16.9"W x 7.0"H

Includes: Mounting hardware

Part No.	Description	1	10
146851CP	19" chassis w/ 300W PS	$295.95	$269.35

19" Rack Mount Enclosure for 14" Monitor

- Clear glass front panel
- Hinged door for accessing monitor controls
- Color: gray
- Size: 19.0"W x 15.1"D x 14.0"H
- Weight: 30 lbs.

Part No.	Description	1	10
136021CP	Enclosure for 14" monitor ..	$249.95	$224.95

19" Rack Mount Drawer with Keyboard and Trackball

- Occupies a single unit (IU) rack space
- 5-pin DIN connector for keyboard and DB9 connector for trackball
- Color: gray
- Size: 19"W x 13"D x 2.8"H
- Weight: 18 lbs.

Includes: Wrist pads, module and software

Part No.	Description	1	10
150471CP	Rack mount KB drawer	$249.99	$224.99

16-Slot ISA-PCI-PICMG Passive AT Backplane

- Ten 16-bit ISA slots, four 32-bit PCI slots and two 48-bit PICMG slots
- LED indicators for ±5V/±12V
- Compatible with P/N 146851CP (below left)
- Size: 12.5"L x 10.0"W
- Weight: 1.9 lbs.

SALE

Part No.	Description	1	10
135061CP	Passive AT backplane	$119.95	$109.95

Cabinet Mounting Plate for 19" Cabinet

- Use as industrial chassis mounting plate for servers, PCs or patch panels
- Made of industrial grade steel and aluminum
- Size: 19.0"W x 15.8"D x 3.5"H   • Color: beige

Part No.	Description	1	10
149500CP	Cabinet mount plate	$39.95	$35.95

Removable HD Rack and Insert

- For quick drive swapping
- Removable storage for 3.5" IDE drive
- Power LEDs
- Keylock for security

196040CP:
- Size: 5.8"W x 8.5"D x 1.5"H
- Weight: 1.2 lbs.

196031CP:
- Size: 4.1"W x 7.5"D x 1.6"H
- Weight: 0.8 lbs.

Includes: Inner cable with IDE connector

Part No.	Description	1	10	25
196040CP	IDE rack w/ insert ..	$27.95	$20.95	$14.69
196031CP	Insert for 196040	19.95	17.99	15.99

19" Cable Management Racks

Make your cable looms neat and organized with our 2 unit cable management rack. Simply slip in the cable between spaces and route them to their destinations.

208776CP

209031CP

Part No.	Description	1	10
208776CP	Ducting type cable holder	$21.95	$19.95
209031CP	C clamp type cable holder	21.95	19.95

SCSI-I External Subsystem Enclosure

For Multiple HDs, Network CD-Servers, RAIDs

One 5.25" Full Height or 2-Half Height Bays

- Zinc plated metal body w/ streamlined plastic front panel
- Internal SCSI cables with ID address selectors
- Switching power supply
- UL/CSA/TUV approval
- High quality internal SCSI cables
- **SCSI-II & SCSI-III versions can be special ordered**
- Size: 7.1"W x 11.3"D x 6.5"H
- One-year warranty

Shown with removable rack (not included)

Part No.	Description	Power	Weight (lbs.)	1	10
129761CP	SCSI-I: 1 full height or 2 half height bays	80W	8.3	$79.95	$69.95

Relay Rack & Rack Panels

Rack:
- Black powder coat finish
- 10-32 threaded holes
- Used with 19" wide panels
- 16 gauge CRS base   • Size: 84"H
- 1/8" aluminum side rails
- Size (at base): 19.8"W x 15.3"D x 84"H

133751CP

19" Wide Panel:
- 10-gauge black aluminum
- Size: 1.75"H

133276CP

Part No.	Description	Wt. (lbs.)	1	10
133751CP	Relay rack	21.8	$179.95	$161.95
133276CP	Rack panel	0.4	9.45	8.49

Rack Mount Card Cage

- For 19" rack mounts
- 24 slots
- Weight: 6.3 lbs.
- Fits card size: 6.5"L x 5.5"W
- Size: 6.5"L x 17.3"W x 6.1"D

Part No.	Description	1	10	25
172099CP	Rackmount card cage	$7.95	$5.99	$4.19

IDE Removable 5.25" Rack Kit for 3.5" Hard Drive w/ Fan

- Supports DMA 66 hard drive
- Removable storage for 3.5" hard drives
- LED for power and hard drive activity
- Retaining lock mechanism
- 12VDC @ 50mA fan   • CFM rating: 5.6
- Size: 5.9"W x 8.7"D x 1.6"H   • Weight: 1.3 lbs.

Includes: Mounting hardware

Part No.	Description	1	10	25
170608CP	Rack kit (IDE)	$29.95	$26.95	$23.95

IDE Hard Drive to Parallel Port Adapter

ATEN

- Allows connecting hard drive to a parallel port
- Use with IDE drives up to 8.46GB
- Compatible with DOS and Windows®
- Enters power save mode after 20 minutes idle time
- Size: 8.8"L x 5.3"W x 1.5"H
- Weight: 4.5 lbs.

Includes: 120VAC external power adapter, cable, manual and carrying case

Part No.	Description	1	10
129699CP	3.5" ext. HD enclosure	$76.95	$69.75

Color Code Legend
New Sale Qty. Save Closeout

ISA High-Speed 4-Port Serial I/O

Quad 16C650 Serial Ports

- 32-byte FIFO
- 16-bit ISA interface
- MS-DOS, Windows® 3.x, 95 and NT compatible
- Four 16C650 ultra high-speed serial ports
- Supports COM 1-8 & IRQs 3-15 (jumper selectable)
- One-year warranty
- Size: 6.2"L x 4.3"W
- Weight: 1.2 lbs.

System requirements: IBM PC/AT & AT compatibles

Includes: 37-pin male to 4 DB25M cable and manual

Part No.	Product No.	1	10
152291CP	4042A	$54.95	$49.95

ISA 1 & 2-Port High-Speed Serial I/O

Single & Dual 16C650 UART Ports

- 16-byte FIFO
- Transfer rates up to 921kb/sec.
- IRQ (3, 5, 7, 9, 10, 11, 12, 15) and address jumper configurable
- Weight: 0.5 lbs.

171504CP: Single High-Speed Serial Port
- RS-232 V24 standard serial interface
- 1 DB9 male connector
- Size: 5.0"L x 2.0"W

171555CP: Dual High-Speed Serial Ports
- 2 DB9 male connectors
- Size: 5.0"L x 2.7"W

System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171504CP	Single serial	$13.69	$12.45
171555CP	Dual serial	24.95	17.49

ISA 4-Port Serial I/O

Quad 16C550 Serial Ports

- High-speed 16C550 UARTs with 16 or 32-byte FIFO
- 4 serial ports; 2 each DB9M and DB25M
- IRQs: 3, 4, 5, 9, 10, 11, 12, or 15
- Weight: 0.7 lbs.
- Supports IRQ sharing
- One-year warranty

COM	Address	COM	Address
1	3F8	5	3F0
2	2F8	6	3E0
3	3E8	7	2E0
4	2E8	8	260

System requirements: IBM AT & higher compatibles

Includes: DB25 male and DB9 male panel bracket assembly and instruction sheet

Part No.	Description	1	10
132572CP	4-port hi-speed serial	$59.95	$53.95

Computer Cables on page 160

PCI Ultra High-Speed Parallel

Single Ultra High-Speed Port

- Supports ECP and EPP
- 32-byte FIFO
- Transfers data up to 2MB/sec.
- Supports IRQ sharing
- Plug & Play ready
- 1 DB25 female connector
- 32-bit PCI interface
- Size: 4.7"L x 2.2"W
- Weight: 0.5 lbs

System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171926CP	PCI single parallel	$39.95	$35.95

ISA High Speed Parallel

21.4MB/Sec. Bidirectional

- Supports ECP/EPP/ SPP/BPP standards
- Printer mode, address and IRQ (3, 4, 5, 7, 9, 10, 11, 12, 15) jumper configurable
- 32-byte FIFO
- DB25 female connectors
- Supports DACK 1-3 and DRQ 1-3
- Size: 5.0"L x 2.2"W
- Weight: 0.5 lbs.

System requirements: IBM PC/AT compatible with 16-bit ISA slot

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10	25
171651CP	Single parallel	$12.59	$11.39	$10.39

ISA 2-Port Parallel

21.4MB/Sec. Bidirectional

- Supports EPP/ECP/ SPP+BPP/ECP+BPP
- Supports 770kB/sec. transfer rate in EPP/SPP/BPP modes
- IRQ: 3/4/5/7/9/10/11/12/15 and address selectable per port
- Compatible with color printers, scanners, plotters, ZIP drives and MP3 players
- 1 external DB25 female connector and 1 internal 26-pin male header
- Weight: 0.6 lbs.

System requirements: 75MHz or higher compatible, 32MB RAM, 16-bit ISA slot, Windows® 95/98/ME/NT/2000

Part No.	Description	1	10	25
132214CP	2-port printer	$27.95	$25.15	$22.65

ISA Single-Port Parallel

Single Bidirectional Parallel Port

- Single standard and bidirectional port
- Jumper selectable for printer address and port (LPT1 - LPT3)
- Jumper selectable for IRQ addressing (3, 4, 5, 7, 9)
- Size: 4.0"L x 2.0"W
- One-year warranty

System requirements: PC/XT/AT and higher

Part No.	Description	1	10	25
155660CP	Printer card	$19.95	$17.95	$14.95

PC Diagnostic Software "Quicktech '98"

Self-booting software for 386, 486 and Pentium® II/MMX/III/AMD Athlon

- Verify proper operation and troubleshoot failures of all major PC components: hard drives (MFM, RLL, IDE, SCSI); floppy drives; base, extended and external cache RAM; VGA/EGA/VESA compliant video cards; keyboard; monitor; printer; and I/O ports
- 48 hour burn-in mode for lengthy testing
- Floppy drive head cleaning function

Includes: Loopback testers for DB9 and DB25 serial and DB25 parallel ports, manual and 3.5" disk

Part No.	Description	1	10
134826CP	QuickTech '98 software	$132.95	$119.95

Diagnostic Card for PCI-Bus Systems

This is the first diagnostic card for monitoring Power-On-Self-Test results in systems using PCI-Bus architecture.

- Plugs into any PCI I/O slot
- Digital indicators for every POST code error
- LEDs for monitoring power (DC): +12, -12, +5, +3
- LEDs for clock and reset failure
- Comprehensive manual w/ error codes from all major BIOS manufacturers including AMI, AWARD, PHOENIX and more
- One-year warranty

Part No.	Description	1	10
135108CP	PCI-POST diagnostic card	$219.95	$197.95

Computer Monitor & NTSC Tester

Mac, PC and TV

- Tests VGA, Super VGA, Mac monitors and TVs
- Checks full-field color bars, color raster, dots (static and dynamic convergence), cross-hatch and windows (power supply regulation, checks for a clear distinction between white and black portions)
- Connectors: HDDB15F, DA15F
- Two video connectors for TV, composite and S-video
- Power with either a 9V battery or an external DC adapter (recommend P/N 151095CP, pg 200 or P/N 100845CP, pg 52)
- One-year warranty
- Size: 5.5"L x 3.0"W x 1.4"H
- Weight: 0.7 lbs.
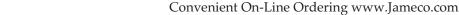
Part No.	Description	1	10
149729CP	Computer monitor tester	$189.95	$179.95

Jameco Special Values!

See the yellow & green highlighted items. Details on page 4.

PCI Ultra High-Speed I/O

Serial 16C550 and Parallel Port

- 32-bit PCI bus with PCI bus 2.1 specification compliant
- Serial ports are software configurable with throughputs up to 921.6kbps
- BPP/SPP mode compliant
- Windows® 95/98/NT 4.0 drivers supported

169594CP

169594CP: 2 serial DB9M on card and 1 parallel DB25F panel bracket assembly

Part No.	Description	1	10
146691CP	Single parallel	$39.95	$35.95
163707CP	Dual parallel.............................	49.95	44.95
146667CP	Dual serial (16C550)...................	38.95	36.95
169594CP	2 serial (16C550) and 1 parallel	59.95	53.95

PCI High-Speed I/O Combo Card

2 Serial 16C650 and 1 Parallel ECP/EPP Ports

- 16C650 UART compatible
- 2 ultra high-speed RS-232 ports and 1 high-speed ECP/EPP parallel port
- Serial port transfer rate up to 921kB/sec. and parallel port up to 2MB/sec.
- 32-byte FIFO buffer
- Supports IRQ sharing
- 32-bit PCI interface
- Plug & Play ready
- 2 DB9 male & 1 DB25 female connector w/ bracket
- Size: 4.7"L x 2.9"W • Weight: 0.6 lbs.

System requirements: 486/586 and higher compatibles; Windows® 95/98/NT/2000

Includes: Manual, DB25F panel bracket assembly and drivers on CD-ROM

Part No.	Description	1	10
172013CP	2 serial/1 parallel	$59.95	$53.95

PCI 4-Port I/O

2 Serial 16C650 and 2 Parallel ECP/EPP/SPP/BPP Ports

- Plug & Play compliant
- Serial port: SUN1889 chipset; 32-byte FIFO; compatible with 16C450/550/650 chip; RS-232 IEEE standard interface; 921kb/sec. transfer rate
- Parallel port: SUN1689 chipset, 32-byte FIFO; ACC3203/ST78C36/HT6535 compatible chips; ECP/EPP/SPP IEEE standard interface; 2Mb/sec. transfer rate
- 2 DB9 male connectors and 2 DB25 female connectors
- Size: 4.7"L x 3.6"W
- Weight: 0.8 lbs.

System requirements: 486/Pentium® & higher comp. Windows® 95/98/NT/2000; available PCI slot

Includes: Manual, cable and CD-ROM drivers

Part No.	Description	1	10
173260CP	PCI 4-port	$59.95	$55.95

PCMCIA RS-232 Interface

PC card/PCMCIA-based serial port card.

- Low cost single port RS-232 interface
- Uses 16550 UART
- 5, 6, 7 or 8 data bits
- Odd, even or no parity
- 115k baud data rates
- Configured as COM1, COM2, COM3 or COM4
- PCMCIA type II compliant

Includes: 1' cable

Part No.	Description	1	10
164451CP	PCM-COM232 card	$119.95	$104.95

Bidirectional Serial/Parallel Converter

115.2kbps, 512kb Buffer

- One DB25 female connector, one Centronics 36-pin male connector
- DCE/DTE selectable
- Fully compatible with Windows® 95
- Baud rate: 300bps – 115,200bps
- FCC class A certified, CE certified
- LED indicator for parallel busy status
- Stop bits: 1 or 2
- One-year warranty
- Size: 3.8"L x 2.4"W x 1.0"H
- Weight: 0.8 lbs.

Includes: 9VAC @ 200mA adapter

Part No.	Description	1	10	50
182983CP	Converter	$54.95	$49.95	$45.95

16-Bit Active-Slot PC Extension Interface

Gives you three additional expansion slots.
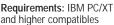
- Compatible with 8 or 16-bit ISA cards
- Supports: MONO/EGA/VGA/FDC/HDC, game and most I/O
- Control card installs inside your PC with four external slots
- Two mounting brackets to interface the unit via 37 and 62-pin cables
- Isolates system providing short circuit protection
- Can insert and remove cards while power is on
- Can be powered off the PC or externally using 6-pin connection (P/N 78318CP & P/N 78326CP, pg 125)
- One-year warranty
- Size: 9.5"L x 6.8"W x 1.0"H • Weight: 5.5 lbs.

System requirements: IBM PC/XT and higher comp.

Part No.	Description	1	10
131238CP	PC slot extender unit	$279.95	$251.95

ISA Dual-Port Game Card

- Enables two people to play a game at the same time
- Uses standard IBM type joysticks
- Two game ports

Requirements: IBM PC/XT and higher compatibles

Part No.	Description	1	10	25
105515CP	Game card	$4.95	$4.49	$4.19

PCI High-Speed Multi-Port Serial I/O
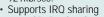
2, 4 or 8 16C650 Serial Ports

- 32-byte FIFO
- Plug & Play compatible
- Standard RS-232 interface
- Transfer rate: up to 921kb/sec.
- Supports IRQ sharing

171547CP

172005CP: Dual 16C650 Serial Ports
- Two DB9 male connectors
- Size: 4.7"L x 2.8"W • Weight: 0.5 lbs.
Includes: Manual and drivers on CD-ROM & floppy

171547CP: Quad 16C650 Serial Ports
- Size: 4.7"L x 2.8"W • Weight: 0.9 lbs.
Includes: Manual, cable (37-pin male to 4 DB25 male) and drivers on CD-ROM

171660CP: Eight 16C650 Serial Ports
- Size: 6.5"L x 3.6"W • Weight: 1.8 lbs.
Includes: Manual, internal cable with bracket, 2 cables (37-pin male to 4 DB25 male) and drivers on CD-ROM

System requirements: 486 and higher compatibles, Windows® 95/98/NT/2000

Part No.	Description	1	10
172005CP	2-port PCI serial	$59.95	$53.95
171547CP	4-port PCI serial	129.95	116.95
171660CP	8-port PCI serial	179.95	161.95

PCI Single-Port Serial I/O

Single 16C550 Port

- Plug & Play ready
- Transfer rates up to 921kb/sec.
- 32-bit PCI bus interface
- 32-byte FIFO
- Supports IRQ sharing
- Size: 4.8"L x 1.8"W
- One-year warranty

System requirements: 486/Pentium® and higher compatibles; Windows® 95/98/NT/2000
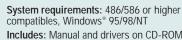
Part No.	Description	1	10
171361CP	Single serial	$38.95	$35.95

ISA 1 & 2-Port High-Speed Serial I/O
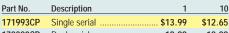
Single & Dual 16C650 Serial Ports

- 32-byte FIFO
- IRQ (3, 5, 7, 9, 10, 11, 12, 15) and address jumper configurable
- DB9 male connector
- Size: 5.0"L x 2.0"W

171993CP

System requirements: 486/586 or higher compatibles, Windows® 95/98/NT

Includes: Manual and drivers on CD-ROM

Part No.	Description	1	10
171993CP	Single serial	$13.99	$12.65
172380CP	Dual serial	19.99	18.99

Color Code Legend
New Sale Qty. Save

World Famous Boston Acoustics Self-Amplified Speaker and Subwoofer System

BostonAcoustics

The key to this 3-piece outstanding speaker system is the 2 ½″ satellite speakers that deliver rich mid and high frequency response. Boston Acoustics employs advanced computer modeling to design drivers that reproduce seven audible octaves with remarkable accuracy and smoothness. The satellite speakers come with their own stand and MagnaGuard magnetic shielding to prevent video interference. The subwoofer delivers a robust room-filling sound that compliments the satellite speaker output.

- Frequency response (±3dB): 56Hz – 20kHz
- Maximum sound pressure level: 104dB
- Cross over frequency: 240Hz • Weight: 6.0 lbs.
- Master volume/power & sub-woofer volume switch
- Satellite speaker size: 3.3"L x 3.3"W x 3.5"H
- Subwoofer speaker size: 7.8"L x 6.0"W x 7.0"H

Includes: 12VAC @ 2A power supply

Part No.	Description	1	5
213911CP	Speaker/subwoofer system	**$64.95**	**$59.95**

Amplified Speakers with 3D Effect

- 3D surround effect
- 4-Watt (RMS) @ 2-Watt (RMS) per speaker
- Volume control, LED indicator and headphone jack
- Size: 3.3"W x 4.3"D x 7.0"H
- Weight: 1.7 lbs.

Includes: 9VDC @ 600mA transformer

Part No.	Description	1	10
211748CP	4W (RMS) speakers	**$10.95**	**$9.85**

480-Watt Multimedia Amplified Speakers

- Input voltage: 120VAC
- 2 speakers
- Magnetically shielded
- 2-channel stereo amplifier
- Push button type power switch with LED indicator
- Knob controls for volume, bass & treble
- Size: 5.5"W x 7.0"D x 9.1"H • Weight: 5.3 lbs.

Part No.	Description	1	10
196066CP	480W speakers	**$39.95**	**$35.95**

PCI Sound with Wavetable

YMF724F-V Chipset

- PCI 2.1, PC '97/98 and PCI bus power management rev. 1.0 compliant
- PCI bus master for PCI Audio back and capture; direct sound/direct music ha
- Legacy audio compatibility
- Supports Yamaha AC-3 device
- Input jacks for line-in/microphone/audio output; 15-pin port for joystick • Size: 5.0"L x 3.4"W

System requirements: Pentium® 100MHz or faster; 16MB of RAM; available PCI slot; Windows® 95; 15MB hard disk space; CD-ROM drive

Part No.	Description	1	10
199611CP	PCI sound card	**$24.95**	**$22.45**

COBY®

Omnidirectional Microphone Headset

- Frequency range: 20Hz to 20kHz (headset); 50Hz to 16kHz (microphone)
- Impedance: 32Ω
- Maximum power: 100mW
- Sensitivity: 98dB (headset); -62dB (microphone)
- Swivel microphone arm pivot
- Flexible microphone arm
- 6' cord • Two 1/8" phone jacks

Part No.	Description	1	10
153875CP	Microphone headset	**$10.95**	**$9.95**

Telephone Headset

A condenser microphone with adjustable gooseneck boom. Swinging earpiece allows headset to be worn on either ear.

- Connector: 2.5mm male stereo plug
- Gooseneck length: 4.9"
- Compatible with Motorola cell phones
- Cord length: 4'3" • Color: beige

Part No.	Description	1	10
189923CP	Telephone headset	**$2.19**	**$1.89**

In-Ear Stereo Headphones

- 3.5mm input jack connector
- Typical application: CD player
- Color: gray • 4' Long

Part No.	Description	1	10	100	1000
191880CP	Headphones	**$.39**	**$.36**	**$.32**	**$.29**

Hands-Free Condenser Microphone

- Cord length: 8'
- Connector: 3.5mm male stereo plug
- Size: 1.9"L x 1.2"W x 0.3"H
- One-year warranty
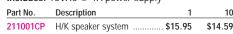
Part No.	Description	1	10	50
135247CP	Microphone	**$3.69**	**$2.79**	**$1.95**

Harman/Kardon Multimedia Amplified System

- 4.5 watt RMS per amplified speaker
- Transducer: 3" full range driver, magnetically shielded
- Frequency range: 90Hz to 20kHz
- Volume control, bass and trebel control, LED indicator and headphone jack • Weight: 4.7 lbs.
- Size: 8.5"H x 4.5"W x 5.0"D (per speaker)

Includes: 16VAC @ 1A power supply

Part No.	Description	1	10
211001CP	H/K speaker system	**$15.95**	**$14.59**
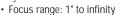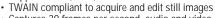
30-Day Money-Back Guarantee
If you're not satisfied we'll take it back! Details on page 201.

QuickCam Video Camera

QuickCam lets you send video images and photos over the internet as easily as you now send text.

- Focus range: 1" to infinity
- 3.6mm lens with F2.0
- 46˚ field of view
- 24-bit color
- Image resolution: 352 x 288 pixels
- Supports BMP, TIFF, JPEG file formats
- TWAIN compliant to acquire and edit still images
- Captures 30 frames per second, audio and video capturing supported
- Supports AVI, RM file formats
- Parallel port interface (DB25 male connector)
- Size: (camera) 2.3" diameter • Weight: 1.0 lb.

System requirements: Pentium® 100MHz processor, 16MB of RAM, 10MB hard disk space for applications, CD-ROM, Sound Blaster compatible sound card, Windows® 95/98

Includes: Manual, 5-pin DIN to PS/2 adapter and CD-ROM drivers ✶ Refurbished

Part No.	Description	1	10
191759CP	QuickCam ✶	**$29.25**	**$26.25**

USB WEBCAM Video Camera

With Motion Detection Software

- Create video images and send via email
- Capture still photos using motion detection software
- USB-A male interface
- Compatible with Windows® 98/ME/2000
- CMOS sensor • Manual focus lens
- Image resolution: 352 x 288 pixels
- Frame rate: up to 30 frames per second
- Size: 2.3" diameter • Weight: 1.0 lb.

DEXXA

System requirements: IBM PC with Pentium® 233MHz or higher compatible, Windows® 98/ME/2000, CD-ROM, available USB port

Includes: Mounting base, installation guide, CD-ROM drivers and software

Part No.	Description	1	10
191775CP	USB WEBCAM	**$24.95**	**$22.45**

USB PenCam Digital Camera

Still and Streaming Video Capable

- USB Interface
- Compatible with Windows® 98/ 2000 and ME
- High resolution 352 x 288 (20 still shots)
- Low resolution 176 x 144 (80 still shots)
- Up to 12 seconds of AVI streaming video
- Up to 2-hour battery life (full-time usage)
- 10-second self timer
- Size: 4.8"L x 1.3"W x 0.8"D
- One-year warranty

Requires: 2 AAA batteries not included (recommend P/N 185279CP, pg 200)

Includes: CD-ROM software bundle with Pocket Cam Manager, Photo Express 3.0, Photo Explorer 3.0, COOL 360 1.0, Video Live Mail Plus 3.11b, and Microsoft Net Meeting 5.0; 5' USB cable; camera stand and camera clip

Part No.	Description	1	10
177199CP	Digital PenCam	**$49.79**	**$46.49**

AGP TV/Video Capture Card "All-In-Wonder PRO"

- On-board 8MB synchronous RAM display buffer
- Separate horizontal and vertical sync
- 3D RAGE accelerator chip supports gouraud shading, perspective correction, alpha blending, Mip mapping, bilinear filtering, z-buffering 3D triangle set-up engine and dbx TB audio
- Turns your PC into an intelligent TV with zoom-in, schedule viewing, channel scanning, video capture, closed captioning, program transcript recording, instant replay functions
- Input/output connectors: HDDB15 female connector for monitor; 8-pin mini DIN connector for audio/video input and output; cable TV jack

System requirements: Pentium® or higher compatible; AGP slot; Windows® 95 or 98; VGA monitor with minimum 640 x 480 resolution

Includes: CD-ROM drivers; 3 A/V in & out cables

Part No.	Description	1	10
196963CP	TV/video capture card	$83.25	$74.95

Video Capture PCI Card with Camera

- Plug & Play PCI specification version 2.1 compliant
- CIF (common interlace format) for image capturing
- True motion codec (compression & decompression)
- Video conferencing, video messaging, editing & manipulation software suite
- NTSC/PAL/SECAM composite video capture at a full 640 x 480 resolution with 24-bit color depth
- Capture and compress video at rates of 30 frames per second
- Size: 4.8"L x 2.2"W • Weight: 0.8 lbs.

System requirements: Windows® 95 or better; Pentium® 133MHz or better; 16MB of RAM; 46MB hard disk space, 4X CD-ROM; PCI video board with 2MB of memory; 640 x 480 display with 8-bit color depth; available PCI slot.

Includes: Manual on CD-ROM, CD-ROM drivers, and camera

Part No.	Description	1	10	25
180110CP	Video capture card	$47.79	$42.95	$38.75

USB Color Video Camera

- Plug & Play compatible
- Sensor: 1/3" CMOS
- 640 (H) x 480 (V) pixels
- Minimum illumination: less than 15 lux
- Integrated lens: F2.0
- Resolution and output performance: VGA (640 x 480) up to 10 frames per second
- Size: 3.6"L x 2.1"W x 2.0"H • Weight: 0.4 lbs.

System requirements: Pentium® 166MHz, 16MB of RAM, Windows® 98, USB port

Includes: CD-ROM drivers

Part No.	Description	1	10
204134CP	USB color video camera ...	$29.95	$26.95

ISA 16-Bit VGA Card

- Supports 16 colors; requires 1MB video RAM
- Supports VESA standard graphics & text modes
- Emulates VGA, EGA, CGA, MDA & Hercules modes
- 1024 x 768 resolution in non-interlaced/interlaced modes • Output HDDB15 female (analog)
- On board memory: 512kB, expandable to 1MB using P/N 128688CP, pg 65

Requirements: IBM AT and higher compatibles

Includes: Software and manual

Part No.	Description	1	10	25
104660CP	VGA card	$49.95	$44.95	$39.95

PCI Graphics Accelerator Card
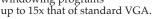
- High performance SIS6326 8MB PCI graphics accelerator
- 800K polygon/sec
- Supports texture, transparency, blending, wrapping and mirror, fogging and blending, point sampled, linear and bi-linear texture filtering
- Built-in direct draw accelerator
- Supports per pixel texture perspective correction
- 14-bits resolution in IDCT transformation
- Supports Z & alpha buffer • Size: 5.5"L x 2.5"W
- Built-in NTSC/PAL video encoder • Weight: 0.4 lbs.

Includes: CD-ROM manual and drivers

Part No.	Description	1	10
210833CP	PCI accelerator card	$39.95	$35.95

VESA 24-Bit Graphics Accelerator Card

Increases speed of graphics and windowing programs up to 15x that of standard VGA.

- Provides 24-bit true color at 640 x 480 pixels, 16M colors • Connector: HDDB15 female
- On board memory: 1MB, expandable to 2MB using P/N 128688CP, pg 65
- Non-interlaced/interlaced modes supported

Requirements: Intel® 486 & higher compatibles

Part No.	Description	1	10
137285CP	Graphics accelerator	$31.29	$27.99

Audio/Video Adapters (CAT 5 UTP)

- Converts impedance of video/audio signals to 100Ω for transmission over CAT 5 UTP cable
- Supports both NTSC or PAL video signals
- Built-in impedance matching device & filter for video & audio signal transmission
- Use with existing premises wiring and wall jacks for easy and cost effective installation

155002CP

210471CP

- Video transmission distance: 1000' color/2000' B/W

195750CP: Signal pair: video (BNC), CAT pair 1 (RJ45)
Includes: RJ45 to wire terminal block adapter

210471CP: Signal pair: video (BNC), CAT pair 1 (RJ45)

155002CP: Signal pairs: video (BNC), CAT pair 4 (RJ45); audio 1 (RCA), CAT pair 3 (RJ45); audio 2 (RCA), CAT pair 2 (RJ45)
Includes: 1 RCA to BNC adapter & 2 mounting screws

Part No.	Connector Type	1	10
195750CP	BNC/RJ45	$29.95	$26.95
210471CP	BNC/RJ45	29.95	26.95
155002CP	BNC/RCA/RJ45..........................	42.95	38.95

AverKey *Pro* PC to TV Converter Box

- Converts VGA video or Macintosh® 640 x 480 to standard NTSC
- Built-in flicker filter
- Resolution: 800 x 600
- TV brightness control
- Compatible w/ Microsoft® Windows® 3.0 and higher
- Two-year warranty
- Size: 6.0"L x 4.0"W x 1.0"H • Weight: 2.2 lbs.

System requirements: VGA-based PC, DOS 3.0 or higher, 640kB RAM or larger

Includes: Compact PC to video converter box, transformer, utilities diskette, cables and manual

Part No.	Description	1	10
167193CP	Video signal pro	$109.95	$99.95

15" SVGA Color Monitor

- 0.28mm dot pitch
- Resolution: 1280 x 1024 @ 60Hz
- Digital panel control
- Input voltage: 100-240VAC, 50/60Hz (auto switching)
- Power, contrast, brightness, horizontal and vertical size position, recall and trapezoid front control
- HDDB15 male connector • UL/CSA/TUV approved
- Size: 14.5"W x 16"D x 14.6"H
- Weight: 45 lbs. ✱ Refurbished

Requirements: IBM PC/XT or higher compatibles

Includes: Power cable, tilt and swivel base

Part No.	Description	1	10
153306CP	13.5" diagonal view ✱	$99.95	$89.95

14" SVGA Color Monitor
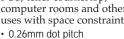
- 13" diagonal view
- 0.28mm dot pitch
- HDDB15 male connector
- Power, contrast, brightness, horizontal and vertical position, recall and trapezoid knob adjustments
- Resolution: 1280 x 1024 @ 60Hz
- Input voltage: 100-240VAC @ 50-60Hz
- Size: 14.2"W x 14.6"D x 13.5"H
- Weight: 25 lbs. ✱ Refurbished

Requirements: IBM PC/XT or higher compatible

Includes: Power cable, tilt and swivel base

Part No.	Description	1	10
174537CP	13" diagonal view ✱	$69.99	$64.99
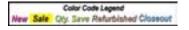
10" SVGA Color Monitor

With its high contrast, sharp image, and compact size, this monitor is ideal for POS, teller countertop, computer rooms and other uses with space constraints.

- 0.26mm dot pitch
- HDDB15 male connector
- Resolution: 1024 x 768 @ 87Hz (max.)
- Input volt.: 115-230VAC @ 50/60Hz (auto switching) • Wt.: 24 lbs. • UL/CUL/CE/TUV approved
- Power, brightness, contrast, vertical size, vertical position and horizontal position user's control
- Size: 12.8"W x 15.0"D x 11.2"H ✱ Refurbished

Part No.	Description	1	10
210850CP	10" diagonal view ✱	$59.95	$53.95

PS/2 2-Button No Tail Mouse

Perfect mouse for laptop and mobile power users. Extract cable to desired length in small spaces thus eliminating tangle and loose cables. Cable retracts into the body of the mouse for compact storage and mouse is switchable from PS/2 to serial.

- Retractable cable for laptop and power notebook users
- Switch selectable from PS/2 to serial mouse
- Adjustable to perfectly fit your limited computer work area
- Size: 4.5"L x 2.4"W x 1.1"H

Includes: PS/2 to serial adapter, retractable RJ11 modem cable, and carrying case

Part No.	Description	1	10
213330CP	PS/2 mouse	$9.95	$8.95

Basic PS/2 2-Button Mouse

- Compatible with all major application software
- PS/2 connector (6-pin mini DIN)
- Size: 4.4"L x 2.5"W x 1.4"H

System requirements: IBM PC/XT/AT/PS/2 or compatible systems; Windows® 3.1/95

Includes: 3.5" drivers

Part No.	Description	1	10	100
174326CP	PS/2 mouse	$7.95	$6.95	$6.25

Fast-Tracking PS/2 2-Button Mouse

- Opto-mechanical encoder
- Compatible with all major application software
- Dynamic resolution and fast tracking speed
- PS/2 connector (6-pin mini DIN)
- Compatible with IBM PC/XT/AT 386/486
- Size: 4.2"L x 2.3"W x 1.2"H

Includes: Set up diskette

Part No.	Description	1	10	50	100
159513CP	PS/2 mouse	$9.95	$8.95	$7.95	$6.25

QTRONIX®

PS/2 3-Button Optical Wheel Mouse

- Ergonomic style 3-button optical wheel mouse
- High tech optical sensor for all surface types
- Size: 3.9"L x 2.3"W x 1.5"H
- Weight: 0.2 lbs.

System requirements: IBM PC or compatible, Windows® 98/2000/ME, available PS/2 port

Part No.	Description	1	10	25
199591CP	Optical wheel	$29.95	$26.95	$24.25

Mini Mouse Pad

- Tough non-skid neoprene backing
- Smooth-gliding cloth surface on top
- Size: 7.0"L x 5.5"W

Part No.	Description	1	10	100
121363CP	Mini mouse pad	$2.95	$2.19	$1.49

Single Button Apple Mouse

macally

- 275 CPI resolution
- Soft, quick, responsive mechanical click button
- ADB connector
- 29" cord
- Size: 4.8"L x 2.4"W x 1.2"H
- One-year warranty

Part No.	Description	1	10	25
150480CP	Single button	$16.95	$15.49	$13.95

genica

PS/2 3-Button Mouse

- Compatible with IBM PC/XT/AT systems
- Compatible with major applications
- Male PS/2 connector (6-pin mini DIN)
- Size: 4.2"L x 1.2"H x 2.5"W

System requirements: Windows® 95/98/2000/NT

Part No.	Description	1	10	25	100
166748CP	PS/2 mouse	$5.49	$4.95	$4.49	$3.95

3-Button Serial Mouse

- Microsoft® mouse compatible
- IBM PC/XT and higher compatibles
- Size: 4.3"L x 2.3"W x 1.2"H

Part No.	Description	1	10	50	100
104441CP	Serial mouse	$4.95	$4.49	$4.05	$3.65

USB Trackball

IBM PC and Apple Compatible

- Designed to work with IBM PC (Windows® 98, 2000 or better)
- Also works with Apple® (OS 8.1 or above)
- Large buttons and ergonomic shape
- Removable retaining ring for easy ball removal and roller cleaning
- USB-A male connector
- Tactile micro switches for highly reliable tactile sound and feeling
- Detachable wrist rest
- 1,000,000 life cycles per switch
- Color: Clear opaque top with blue opaque bottom
- Size: 5.7"L x 4.7"W x 1.8"H
- Weight: 1.0 lb.

Part No.	Description	1	10	25
196091CP	Libra 90i trackball ..	$19.95	$14.99	$10.49

QTRONIX®

Trackball with Menu Software

- Detachable wrist support
- Variable resolution (20-6400dpi)
- One million cycle life tactile switches
- Ergonomic design
- One-year warranty
- 3.5" disk
- Size: 5.5"L x 4.6"W x 2.0"H   • Weight: 1.2 lbs.

System requirements: IBM PC/XT & higher compatible systems; MS DOS 3.3 or later, Windows® 95 & higher

Part No.	Description	1	10	25
128995CP	LIBRA 90 MP NET ...	$29.95	$26.95	$24.25

Trackman Marble FX™

Logitech

- Ergonomically designed with large ball for easy precise control
- Marble sensing technology for smooth motion
- Drivers for one-click scrolling and zooming in Office 97
- Male PS/2 connector (6-pin mini DIN)
- Size: 7.2"L x 3.0"W x 3.0"H   • Weight: 1.5 lbs.

System requirements: IBM or compatible systems; Windows® 95 and higher; available serial or PS/2 port

Includes: 3.5" disk drivers, PS/2 to serial adapter and manual

Part No.	Description	1	10
189827CP	Trackman marble FX	$49.95	$35.95

Front Panel Access Ports

Tired of crawling under your desk or standing on your head to plug something into your computer? With these 3.5" front panel access ports, you can customize your PC's to have access to the rear panel USB, IEEE 1394, audio, and serial ports. Now you can enjoy the easy upfront access to all your most used ports without moving the PC.

Tower not included

208004CP: 2 USB; 1 IEEE 1394; Line-In; Line-Out; RS232 (9-pin male)
213532CP: 4 USB; Line-In; Line-Out
213541CP: 2 USB; 1 IEEE 1394; Line-In; Line-Out

Part No.	Description	1	10
208004CP	Front panel port	$34.95	$32.45
213532CP	Front panel port	18.95	16.95
213541CP	Front panel port	18.95	16.95

PCMCIA Card Drive For Desktop PC

PCMCIA drives are commonly found on laptops and power notebooks. Now you can have a PCMCIA drive on your desktop PC. Supports SRAM cards, FLASH cards, LAN cards and FAX/MODEM cards.

Tower not included

- Jumper selectable for 4 drives
- Supports DOS 5.0 or later, Windows 3.1 or later
- Supports Type I/II/III PCMCIA cards

System requirements: IBM PC compatible, 1M free hard disk space, available ISA slot (16-bit), 3.5" bay, DOS 5.0 or later, Windows® 3.1 or later

Includes: Manual, cable and 3.5" diskette drivers

Part No.	Description	1	10
210999CP	PCMCIA drive	$59.95	$53.95

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

It's that simple!

Win 95 104-Key Keyboard with Jumbo Trackball

QTRONIX

- PC/AT and PS/2 compatible w/ DOS 3.0 or higher
- "N-Key" roll-over for quick typists
- Tactile click sound and feel • Weight: 3.7 lbs.
- Size: 19.0"L x 6.8"W x 1.4"H • One-year warranty

Includes: Software and AT cable adapter

Part No.	Description	1	10	25
128717CP	Scorpius 35PM/NET	$99.95	$90.95	$84.95

108-Key Compact Keyboard

QTRONIX

- IBM PC PS/2 or higher compatible
- Use adapter P/N 85500CP, pg 161 for AT systems
- LED indicator for Num, Caps, and Scroll Lock
- Supports Windows® 98 ACPI keys (wake-up, sleep, power) • 12 function keys
- High quality rubber mechanical key switches
- Size: 15.5"L x 6.5"W x 1.1"H • Weight: 1.9 lbs.

Part No.	Description	1	10	25
180347CP	Scorpius 2KP	$39.95	$35.95	$32.49

101-Key Keyboard

COMPAQ

- For PS/2 systems • Tactile touch
- LED indicators for Num, Caps, and Scroll lock
- 12 function keys with separate cursor and numeric keys • Size: 18.3"L x 6.5"W x 1.3"H
- Recommend using adapter P/N 85500CP, pg 161 or P/N 159089CP, pg 176 • Weight: 3.6 lbs.

Part No.	Description	1	10	25
191530CP	101-key keyboard	$19.95	$14.95	$10.95

117-Key Multimedia Keyboard

SALE

- For PS/2 systems
- Use adapter P/N 85500CP, pg 161 for AT systems
- LED indicators for Num, Caps, and Scroll locks
- ± volume buttons, mute button, forward / reverse/play/stop button for multimedia, WWW button, MS DOS button, My Doc button, Menu/? button, screen saver button, close button
- 12 function keys w/ separate cursor & numeric keys
- Size: 18.5"L x 7.0"W x 1.8"H • Weight: 3.6 lbs.

Includes: 3.5" drivers and keyboard labels for buttons

Part No.	Description	1	10	25
174334CP	Multimedia KB	$6.95	$6.25	$5.65

Win 95/98 107-Key PS/2 Red or Blue Keyboards

QTRONIX

195813CP *SALE* **196091CP**

- Tactile key stroke with high quality rubber mechanical switch • Adjustable tilt mechanism
- Opaque red or blue top cover & clear bottom cover
- IBM PS/2 and higher compatible
- Designed for Windows® 98 with ACPI keys (wake, sleep, and power) • Windows® 95 compatible
- Use adapter P/N 85500CP, pg 161 for AT systems
- Size: 18.6"L x 6.5"W x 1.1"H • Weight: 2.0 lbs.

196091CP: See specifications on page 168

Part No.	Product No.	1	10
195821CP	Scorpius 98A Red	9.39	8.39
195813CP	Scorpius 98A Blue	9.39	8.39
196091CP	Libra 90i trackball	19.95	14.99

Space Saver Keyboards

Full featured AT & PS/2 mini keyboards save valuable desktop space.

Mini Keyboards save up to 30% desk space!

Standard Keyboard **114868CP**

- Adjustable tilt mechanism
- Tactile key stroke
- LED indicators for Num, Caps, and Scroll lock

199718CP: 83-key keyboard
199718CP
- For PS/2 systems
- Auto repeat
- N-key rollover
- Size: 12.8"L x 6.2"W x 1.0"H
- Weight: 1.9 lbs.

114868CP: 84-key keyboard
- For AT systems, designed for Windows® 95
- Size: 12.8"L x 6.6"W x 1.0"H • Weight: 2.4 lbs.

211756CP: 88/89-key keyboard w/ touch pad
211756CP
- For AT systems, designed for Windows®
- Built-in touch pad and embedded keyboard
- Soft touch membrane contact
- Size: 11.4"L x 8.5"W x 1.2"H • Weight: 2.3 lbs.

Part No.	Description	1	10	25
199718CP	83-key PS/2	$49.95	$44.95	$38.95
114868CP	84-key AT	56.99	49.49	44.55
211756CP	88/89-key AT	59.95	53.95	48.95

For Keyboard Adapters and Cables – see page 161.

Win 95 104-Key Keyboard

Sun

- For PS/2 systems
- Unmarked window keys
- LED indicators for Num, Caps and Scroll Locks
- 12 Function keys w/ separate arrow & numeric keys
- Tactile feedback • Tilt mechanism
- Size: 18.2"L x 7.0"W x 1.5"H • Weight: 2.7 lbs.

Part No.	Description	1	10	25
173649CP	104-key keyboard	$12.95	$11.49	$9.95

Win 95 104-Key Keyboard

SALE

- IBM PS/2 and higher compatibles
- LED indicator for Num, Caps and Scroll Locks
- Tilt mechanism • Ergonomic style
- 12 function keys • Tactile key
- Use adapter P/N 85500CP, pg 161 for AT systems
- Size: 18.5"L x 7.0"W x 1.0"H • Weight: 2.7 lbs.

Part No.	Description	1	10	25
135482CP	104-key keyboard	$10.95	$9.95	$7.95

Keypads

QTRONIX

- Tactile click-sound and touch
- 2-key rollover
- One-year warranty
- Auto repeat function

129357CP: 22-key serial
- Serial DB9 connector
- Size: 6.2"L x 4.2"W x 1.3"H
- Weight: 0.8 lbs.

129357CP

System requirements:
IBM PC/XT or higher compatibles; and MS DOS 3.X

Includes: 3.5" driver diskette and manual

151811CP: 17-key PS/2
- Switch life of 20 million cycles
- Installs into 6-pin mini DIN keyboard connector (no software required)
- Size: 5.6"L x 3.4"W x 0.9"D

151811CP

Part No.	Description	1	10	25
129357CP	Scorpius 22RW	$39.95	$35.95	$32.49
151811CP	Scorpius 20PB	34.95	31.49	27.95

ATEN 5-Port USB 2.0 PCI Card

40 Times Faster Than the Original USB!

USB 2.0 will offer enhanced functionality, allowing more devices to share the increased bandwidth.

- Supports high speed data transfer rate of up to 480 Mbps
- Full backwards compatible with USB 1.1
- Supports Windows® 98SE/2000/ME/XP
- Hot swappable Plug & Play
- 1 internal USB-A port
- 4 external USB-A ports
- PC Power Management v2.2 compliant

Part No.	Description	1	10
197940CP	5-port USB 2.0 PCI card	$54.95	$49.49

2-Port USB-A PCI Card

- Plug & Play compatible
- Uses VIA VT83C572 controller chip
- USB specification V.1.1 compatible
- USB legacy BIOS supports
- Operates in USB-aware operating system (Win® 95, 98)
- Size: 4.7"L x 2.0"W
- One-year warranty

Includes: Manual

Part No.	Description	1	10	25
155299CP	PCI USB	$24.99	$22.49	$20.25

4-Port USB-A PCI Card

- OPTi 82C862 chipset
- Full compliance with USB Spec Rev 1.1
- PCI specification V.2.1 compliant
- Plug & Play compatibility with external devices
- Auto detects speed and connection of devices
- Tiered star topology supporting up to 5 tiers and 127 devices   • Size: 4.9"L x 3.7"H

System requirements: IBM or compatible with 586 or higher processor; 64MB of memory; available PCI slot; Windows® 98 or higher

Part No.	Description	1	10	25
189042CP	PCI USB	$25.95	$22.65	$18.75

2-Port USB-A CardBus PC Cards

- PCMCIA type-II card
- New 32-bit CardBus
- Size: 4.6"L x 2.1"W
- **208047CP:** USB 2.0 EHCI USB standard; 480Mbps max.
- **189499CP:** USB 1.1 OHCI USB standard; 12Mbps max.

System requirements: Windows® 98, ME, 2000, and Mac OS 8.6 or later

Part No.	Description	1	10
208047CP	USB 2.0 CardBus PC Card	$89.95	$79.95
189499CP	USB 1.0 CardBus PC Card	69.95	62.95

See the yellow and green highlighted items.

Jameco Special Values!

Details on page 4.

USB Thumb Drives

What better way to keep your data safe than to keep it close to you? Thumb drives are compact and fit easily in your pocket or hang it around your neck. Portable and lightweight, no external power needed. No drivers necessary for Windows® ME and above.

217795CP

- 10 year data retention
- Size: 2.9"L x 0.7"W x 0.4"H

Includes: Windows® 98/98SE driver disketttte and quick start guide

New Lower Prices

Part No.	Description	1	10
217752CP	16MB	$29.95	$27.95
217761CP	32MB	36.95	34.95
217779CP	64MB	54.95	51.95
217787CP	128MB	89.95	85.95
217795CP	512MB	299.95	292.95

USB-A to Joystick (DB15) Adapter

- Fully compatible with any 15-pin game port PC game controller
- Mode switch selector for maximum compatibility and flexibility
- USB Plug & Play
- Input connector: USB-A male
- Output connector: DB15-pin female connector
- Size: 3.2"L x 2.3"W x 1.3"H

System requirements: 586 or higher compatible; available USB-A port or Hub; Windows® 98 or higher

Includes: Manual and 3.5" drivers

Part No.	Description	1	10
189510CP	USB to game port adapter	$39.95	$28.95

USB Docking Station

Perfect for laptop users and managing multiple peripherals. Connect one cable to your computer to manage multiple peripherals.

- Input connector: USB-B male
- Output connectors: 2 USB-A female; 2 PS/2 female (keyboard and mouse); RJ45 jack, DB9 male; and DB25 female ports
- LED indicators for power and USB status
- Size: 4.5"L x 2.9"W x 1.0"H
- Weight: 2.1 lbs.

Includes: 5VDC @ 2.1A wall transformer, USB-A male to USB-B male cable, and CD-ROM drivers

Part No.	Description	1	10
190553CP	USB docking station	$75.95	$68.95

For Additional USB Products

Printers	Page 159
Cameras	Page 166
Mice/Trackballs	Page 168

External 3-Port USB Thumbhub

Expand your single USB port to a stacked 3-port thumbhub.

- USB Revision 1.1 compliant
- Downstream port with OCD (over current detection) and OCP (overcurrent protection)
- LED indicators uplink/down port communication, and OCP status
- Supports full speed (12Mbps) and low speed (1.5Mbps) transfer rate   • Self-powered mode
- Compatible with Windows® 98/98SE/2000/ME/MAC OS8.5
- Size: 3.1"L x 0.8"W x 1.2"H

Part No.	Description	1	10
208451CP	3-port thumbhub	$18.95	$16.95

External USB 2.0 4-Port Hub

This hub allows you to connect and add any USB 2.0 peripherals to your PC. USB 1.1 backward compatible allowing all previous devices that you may have function as usual.

- Supports 1.5Mbps low speed, 12Mbps full speed, and 480Mbps high speed data transfer rate
- One USB-B female upstream port and 4 USB-A female downstream port
- Connects up to 127 devices through cascading multiple hubs   • Supports self-powered mode
- Size: 4.0"L x 2.4"W x 1.0"H   • Weight: 1.3 lbs.

System requirements: Pentium® 233MHz or higher and MAC PCs, 64MB of RAM, available USB port, Windows® 98SE/ME/2000/XP/Mac OS

Includes: 5VDC@4A power supply, USB-A male to USB-B male cable, and manual

Part No.	Description	1	10
209007CP	4-port hub	$41.95	$38.29

External 7-Port USB Hub

- 7 USB-A female output ports
- USB-B female root port
- Plug & Play compatible
- Allows you to attach 127 USB devices to your PC
- LED indicators for port, status, and power
- Size: 7.9"L x 2.8"W x 1.1"H   • Weight: 2.6 lbs.

Includes: 6VDC power adapter and USB-A male to USB-B female cable

Part No.	Description	1	10
191450CP	7-Port USB hub	$44.95	$33.75

External 4-Port USB Hub

USB-A Female Plug & Play! Daisy Chainable!

- One USB-B female upstream port, 4 USB-A downstream ports
- Support low-speed and high speed data transfer
- Auto selected self-powered modes
- Overcurrent protection and detection per port
- Hot swappable   • One-year warranty
- Size: 5.1"L x 2.8"W x 1.0"H   • Weight: 1.8 lbs.

System requirements: Windows® 95 OSR 2.1 or Windows® 98; PC with USB port

Part No.	Description	1	10
204628CP	4-port USB hub	$29.95	$26.95

USB-A Female Cables & Bracket

- Supports data transfer rates of 12Mbps
- Allows connection of two devices
- Dual USB-A female connectors • 8" long

Part No.	Description	1	10	25
144813CP	USB-A panel mount ..	$6.95	$6.25	$5.59

ATEN

USB-to-Centronics Printer Cable

USB-A Connector

- Full compliance with the USB spec V.1.0
- USB-A male to 36-pin male centronics connector
- Supports true bidirectional communication
- Applicable to standard and bidirectional printers

Part No.	Description	1	10	25
155352CP	6' USB cable	$29.95	$26.95	$23.95

USB Cable Extenders

- Extends the distance between USB devices by up to 16'
- Complies with USB electrical and timing specifications
- Compatible with high and low speed USB devices
- Interface: USB-A male to USB-A female
- Size: (adapter): 2.8"L x 1.5"W x 0.6"H
- Weight: 1.0 lb.

191441CP

Includes: USB-A male to USB-B female cable

Part No.	Description	1	10	25
191433CP	8' USB extender	$16.59	$14.89	$13.49
191441CP	16' USB extender	29.50	22.95	16.03

USB to Serial Adapter with Prolific Chipset

This USB serial adapter provides an external Plug-and-Play RS-232 port for computers, notebooks, laptops, and handheld held computing devices. Provides high-quality serial connections at transfer rates of more than 500kbps for cell phones, PDAs, digital cameras, modems and ISDN terminal adapters. Since it is a USB connection it eliminates the hassles of traditional serial port connections and IRQ conflicts, thus more devices can be attached to the system.

- Frees existing RS-232 ports for other uses
- Supports RS-232 serial interface, automatic handshake mode, remote wake-up and power management
- Over 500kbps data transfer rate
- Provides a 96-byte buffer for each upstream and downstream data transfer
- Full compliance with USB specification v 1.1
- Has a 7" cable with DB25 male connector and a 14" cable with USB-A connector
- Size: 2.7"L x 1.6"W x 0.7"H • Weight: 1.5 lbs.

System requirements: Windows®98/2000, USB host controlled installed in the system

Includes: 3.5" software and manual

Part No.	Description	1	5
213006CP	USB-A to Serial converter	$29.95	$27.95

USB Gender Adapters

USB-A to USB-B

169383CP: USB-A (male) to USB-B (female)
169375CP: USB-A (female) to USB-B (male) **169375CP**

Part No.	Description	1	10	25
169383CP	1.3"L x 0.4"W	$6.95	$6.35	$5.59
169375CP	1.7"L x 0.6"W	6.95	6.35	5.59

Firewire CardBus PC Card

Designed to connect Firewire devices to any notebook computer. With its two external ports, you can have 63 devices on the same ports with a max speed for 400Mbps. A mini DC jack is provided on the card for IEEE 1394 devices that require power through the cable.

- Fully IEEE 1394 OHCI compliance
- 133MB/s CardBus master DMA transfer rate
- Real time transmission data • Open architecture API
- Peer to peer communication structure
- Backward compatible speeds • 32-bit bus
- Increases efficiency of data transactions while simplifying software driver designs
- Supports Windows® 98SE/ME/XP/2000 & Apple® MAC OS 8.6 or above • Size: 4.7"L x 2.1"W

Includes: 6' Firewire cable, manual, and ULEAD VideoStudio software

Part No.	Description	1	10
215984CP	Firewire CardBus PC Card	$89.95	$79.95

Combo IEEE 1394 and USB 2.0 PCI Card

Create your own videos with this combo PCI card.

- Fully IEEE 1394 (firewire) OHCI compliance
- 133Mbps PCI bus master DMA transfer rate
- 400Mbps transfer rate on IEEE 1394 and 480Mbps transfer rate on USB 2.0
- Supports USB 1.0 and OHCI specifications
- 2 external and 1 internal IEEE 1394 connector
- 3 external and 1 internal USB connector
- Supports Windows® 98/ME/XP/2000 and MAC OS
- Board size: 4.8"L x 3.5"W

Includes: ULEAD VideoStudio software on CD-ROM, drivers and utilities on CD-ROM, internal power cable, IEEE 1394 cable, internal power cable, and manual

Part No.	Description	1	10
208477CP	PCI USB	$99.95	$94.95

External USB-A IrDA Transceiver

Convert your USB port into an infrared communications port to transfer data from you PDA, notebooks, camera, cellular phone, and other mobile devices.

- Adjustable base for height and angle
- Supports standard USB port • Plug & Play
- Supports data transfer rate from 115.2k up to 4Mbit per second • Meets IrDA v1.0 and v1.1
- Transmission distance of 3.3' or 39.4"
- Size: (including base) 2.4"L x 1.6"W x 0.9"H

System requirements: Windows® 98/ME/2000/XP

Includes: Manual, extension cable and 3.5" disk software drivers

Part No.	Description	1	10
213903CP	USB-A to IrDA Transceiver ...	$49.95	$44.95

USB Cables

175417CP   **175425CP**   **199793CP**

USB-A Male to USB-B Male

Part No.	Description	1	10	25
175417CP	3' cable	$4.49	$3.99	$3.59
169359CP	6' cable	4.95	4.49	3.95
169367CP	10' cable	5.95	5.25	4.59

USB-A Male to USB-A Male

Part No.	Description	1	10	25
196904CP	2' cable	$1.99	$1.79	$1.59
175425CP	3' cable	2.95	2.65	2.39
175433CP	6' cable	4.95	4.49	3.95
175441CP	10' cable	5.95	4.49	3.15

USB-A Male to USB-A Female Extension

Part No.	Description	1	10	25
199793CP	6' cable	$4.95	$4.49	$3.95
199806CP	10' cable	5.95	4.49	3.15

Bulk USB Cable

- 150 volt rating
- Temperature rating: 80˚C
- Red and black wire: 24 AWG stranded (7/32)
- Green and white wire: 28 AWG stranded (7/36)
- Prepackaged: order in increments of 25', 100' or 1000'

Part No.	Description	25 ft.	100 ft.	1000 ft.
173139CP	USB cable	$6.75	$20.00	$160.00

USB-A & B Connectors and Pins

159716CP
USB-A

174060CP
USB-B

USB A & B Male Connectors
- 3-part housing: tin plate over brass and glass fiber
- 4-pins (P/N 159724CP) required per USB connector

159724CP: Male Crimp Pin
- Pin for P/N 159716CP and 174060CP (4 required)
- Contact brass
- Use P/N 159265CP for crimping tool, pg 151

✻ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	1	10	100	1000
159716CP	USB-A conn. (M)......	$.79	$.71	$.61	$.44
174060CP	USB-B conn. (M).......	.95	.85	.69	.55
159724CP	Crimp pin	✻	.125	.09	.065

For Female USB Connectors see page 127.

IEEE 1394 Firewire Cables

175821CP   **175839CP**   **175847CP**

Connect your computer to the latest high speed Firewire peripherals.

- IEEE-1394 compliant • UL approved
- Molded connectors • Length: 6'

Part No.	Description	1	10	25
175821CP	4-pin M – M	$15.95	$14.49	$12.95
175839CP	6-pin M – 4-pin M	11.95	10.74	9.49
175847CP	6-pin M – M	9.95	8.94	8.04

Single-Line Telephone Filter

In-line Z-BLOCKER® filter blocks interference between DSL/HPN, voice and RF from cordless phones. Plugs directly into any standard phone jack and works with any single line phone, fax or dial-up modem.

Part No.	Description	1	10	25
196429CP	Telephone filter	$7.95	$7.16	$6.44

Black Magic
Telephone Ringing Generator

Switching inverter that produces low-frequency alternating current to signal telecom ringers or equivalents.

- Frequency: 20Hz
- Series resistor: 300Ω
- Nominal output voltage: 86 Vrms
- No reverse polarity protection

Part No.	Product No.	1	10	25
145816CP	LBMR12	$26.95	$24.49	$21.95

RJ11/RJ45 Retractable Cables

These auto-reel retractable cables are compact and convenient solutions for the mobile professional.

208362CP: RJ11 type
- For telephone and modem applications
- Cord length: 9'6"
- Includes: inline coupler

208362CP

208371CP: RJ45 type, CAT 5e
- For telephone, modem and networking applications
- Cord length: 6'11"

208371CP

Includes: RJ45 right angle adapter and RJ45 to telephone outlet adapter

Part No.	Description	1	10
208362CP	RJ11 cable	$9.95	$8.95
208371CP	RJ45 cable	19.95	17.95

QUIKLINK Automatic Telephone Ring Down Unit

- Applications: elevator and door entry phones; in-office and off-premise emergency hotlines; tie lines between phones, PABX and Key systems; CO line simulators for sales demonstrations; testing rings, answering, and signal path functions in telecom repairs, installation and production
- Ringing power: 70V @ 20Hz modified square wave
- Power input: 12VAC @ 700mA (max.)
- Line feed type: two wire unbalanced
- Max. loop resistance: 600Ω
- Termination: 4-40 screws
- LED hook status indicator; ringing cadence: continuous/1 second on 1 sec. off/2 sec. on 2 sec. off/2 sec. on 4 sec. off; additional power input: 20-28VDC @ 300mA max.; RJ11 terminations
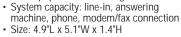
Part No.	Dimensions	1	10
179936CP	4.2"L x 2.5"W x 0.5"H	$99.95	$89.95

AT&T Fax Switcher

- Features automatic ring reduction, answering system transfer and transfer timer, extension in use detection and calling tone detection, dial pulse/rotary transfer, unanswered call transfer, reverse modem detection, remote call alert, line interrupt protection, calling tone detection
- System capacity: line-in, answering machine, phone, modem/fax connection
- Size: 4.9"L x 5.1"W x 1.4"H
- Weight: 1.8 lbs.

Includes: 12VAC @ 830mA power supply, 6' 11" telephone cable, and manual

Part No.	Product No.	Description	1	10
152004CP	ATT200A	Fax switch	$24.95	$17.95

External 56kbps Fax/Modem

- Digital telephone answering machine with voice mail system
- RS-232 (DB9 female) interface
- Modem line speed: 300-56000bps
- Standard compatibility: ITU-T V.92, V.90, V.34, V.32, V.32bis, V.23, V.22bis, V.21 and Bell 103, 212A
- Error correction: ITU-T V.42, MNP2-4
- Data compression: ITU-T 1.42bis, MNP5
- Flow control: RTS/CTS, XON/XOFF
- Comment set: TIA/EIA 602 "AT" command set
- Fax/Modem line speed: 2400~14400bps
- Standard compatibilty: ITU-T V.17, V.27 ter, V.29
- Command set: Class 1, 1.0, 2 and associated AT command sets
- Size: 6.3"L x 4.0"W x 1.3"H

System requirements: Pentium® or PC compatible with 16MB of memory, available RS-232 slot; Windows® 9x/ME/NT4.0/2000/XP

Includes: RS-232 cable (DB25/DB9 female to DB9 male); phone cord, 9VAC@1A power supply, CD-ROM drivers and manual

Part No.	Description	1	10
216493CP	Serial modem (Rockwell)	$49.95	$44.95

Short Haul Modem

- Up to 38,400 baud
- Will communicate over 6.3 miles of cable
- No external power required
- DCE/DTE selectable
- Xon-Xoff or hardware handshaking
- RS-232 interface (DB25 female)

ATEN

Part No.	Description	1	10	25
116581CP	Short haul modem	$29.95	$26.95	$23.95

30-Day Money-Back Guarantee

PHOEBE Networking

See page 174 for Personal Hubs.

Professional Rackmount Fast Ethernet Switch Hubs

- Eliminate bottle-necks and improve your small business

215837CP

network with true 100Mbps connection from JAMECO's choice as the best performance/value combination in networking – PHOEBE.
- Store and forward architecture that eliminates error packets   • LED indicators for link/activity
- Deliver non-blocking performance at full-duplex on all ports   • 10/100Mbps RJ45 ports
- IEEE 802.3 10Base-T and 802.3U 100Base-TX
- Filter/forward rate of 148,800 packets/sec
- Power requirements: 100-240VAC
- Size: 17.4"W x 5.5"D x 1.8"H
- MDI/MDIX supported

Part No.	Description	Wt. (lbs.)	1	10
215651CP	16-port	5.3	$93.95	$86.95
215669CP	24-port	5.7	169.95	161.95
215837CP	32-port	7.7	269.95	251.95

Wireless LAN Network

215600CP

Wireless networking provides students, workers & laptop users seamless roaming connectivity to your network or cable modem. PHOEBE 802.11B wireless products are perfect for small businesses, schools and for the home & will boost productivity while saving you the cost of installing cables throughout your building or home. Simply plug and play and you have a connection to your network in minutes.

215618CP 215626CP

Jameco has reviewed a lot of networking products and companies over the last 12 months and has chosen PHOEBE Micro's products because they offer the best value, performance and quality. The wireless access point unit bridges wired and wireless segments of the network. The wireless USB LAN adapter can be used to extend your existing network to remote sites in your building

- DSSS (direct sequence spread spectrum) provides superior noise immunity to broadband interference
- 11 channels   • 64/128bits WEP encryption   • Freq. bandwidth: 2.4 ~ 2.4835GHz   • IEEE802.11b standard

215626CP	215600CP	215618CP
Transmission power: 18dBm	5MHz Channel spacing	Channel spacing: 5MHz
Access point, access point client & wireless bridge operation mode	PCMCIA Type II; built in 3D antenna Indoor range: up to 50 meters Outdoor range: up to 300 meters	Interface: USB1.1 (client) Indoor range: up to 90 meters Outdoor range: up to 300 meters

Part No.	Description	Receiver Sensitivity	1	10
215626CP	Wireless access point	-82dBm	$97.95	$97.95
215600CP	PCMCIA wireless network card	-80dBm	52.95	49.95
215618CP	Wireless USB adapter	-80dBm	59.95	54.95

Modular Data Network Cables

115721CP
without Boot

124804CP
with Boot

124741CP **124863CP** **124687CP**

- 4 pair
- 24 AWG (7 x 43) stranded
- UTP • 8P8C
- "Snagless" boot
- Color coded for easy wire tracing
- High-flexibility
- Achieve optimum system performance

Category 5e (350MHz)

Part No.	Description	Color	1	10	100
168292CP	3ft. cable RJ45	Gray	$3.99	$3.59	$3.25
168305CP	7ft. cable RJ45	Gray	4.95	4.49	3.95
169261CP	10ft. cable RJ45	Gray	6.95	6.25	5.59
168313CP	15ft. cable RJ45	Gray	6.95	6.39	5.69
168321CP	25ft. cable RJ45	Gray	9.99	8.99	7.99
201777CP	3ft. cable RJ45	Red	3.95	3.55	3.19
201785CP	7ft. cable RJ45	Red	4.95	4.49	3.95
201793CP	15ft. cable RJ45	Red	6.95	6.39	5.69
201806CP	25ft. cable RJ45	Red	9.69	8.69	7.79
201697CP	3ft. cable RJ45	Black	4.49	4.05	3.65
201700CP	7ft. cable RJ45	Black	4.95	4.49	3.95
201718CP	15ft. cable RJ45	Black	6.95	6.39	5.69
201726CP	25ft. cable RJ45	Black	9.69	8.69	7.79
201734CP	3ft. cable RJ45	Blue	3.95	3.55	3.19
201742CP	7ft. cable RJ45	Blue	4.95	4.49	3.95
201751CP	15ft. cable RJ45	Blue	6.95	6.39	5.69
201769CP	25ft. cable RJ45	Blue	9.69	8.69	7.79
201814CP	3ft. cable RJ45	Yellow	4.49	4.05	3.65
201822CP	7ft. cable RJ45	Yellow	5.59	5.05	4.55
201831CP	15ft. cable RJ45	Yellow	6.95	6.39	5.69
201849CP	25ft. cable RJ45	Yellow	9.69	8.69	7.79

Category 5 (100MHz)

Blow-out Prices!

Part No.	Description	Color	1	10	100
115713CP	3ft. cable RJ45	Gray†	$1.09	$.99	$.89
201662CP	3ft. cable RJ45	Gray	1.15	1.05	.95
115721CP	7ft. cable RJ45	Gray†	1.39	1.25	1.15
175273CP	7ft. cable RJ45	Gray	1.49	1.35	1.25
115730CP	15ft. cable RJ45	Gray†	2.19	1.99	1.79
201671CP	15ft. cable RJ45	Gray	2.39	2.15	1.95
115748CP	25ft. cable RJ45	Gray†	3.45	3.15	2.79
181059CP	50ft. cable RJ45	Gray	6.39	5.75	5.19
124724CP	3ft. cable RJ45	Red	1.15	1.05	.95
124732CP	7ft. cable RJ45	Red	1.49	1.35	1.25
124741CP	15ft. cable RJ45	Red	2.39	2.15	1.95
124847CP	3ft. cable RJ45	Black	1.15	1.05	.95
124855CP	7ft. cable RJ45	Black	1.49	1.35	1.25
124863CP	15ft. cable RJ45	Black	2.39	2.15	1.95
170173CP	25ft. cable RJ45	Black	3.55	3.25	2.89
124804CP	3ft. cable RJ45	Blue	1.15	1.05	.95
124812CP	7ft. cable RJ45	Blue	1.49	1.35	1.25
203051CP	10ft. cable RJ45	Blue	1.95	1.49	1.05
170190CP	25ft. cable RJ45	Blue	3.55	2.69	1.89
124687CP	3ft. cable RJ45	Yellow	1.15	1.05	.95
124695CP	7ft. cable RJ45	Yellow	1.49	1.35	1.25
124708CP	15ft. cable RJ45	Yellow	2.39	2.15	1.95
170299CP	25ft. cable RJ45	Yellow	3.55	3.25	2.89

† No Boot

Keystone-Type Wall Plates

212978CP **212994CP** **212986CP** **212960CP**

- Size: 2.8"W x 4.5"H

Part No.	No. of ports	Color	1	10	100
195549CP	1	Ivory	$1.25	$1.15	$.99
195557CP	2	Ivory	1.25	1.15	.99
195565CP	3	Ivory	1.25	1.15	.99
195573CP	4	Ivory	1.25	1.15	.99
212978CP	1	White	1.25	1.15	.99
212994CP	2	White	1.25	1.15	.99
212986CP	3	White	1.25	1.15	.99
212960CP	4	White	1.25	1.15	.99
213508CP	Hole filler	White	.28	.25	.23

Modular Jacks

Punchdown Keystone Type

- Removable jacks used in wall plates (clip in)
- CAT 5e classification
- Punchdown type wiring connections with color coding
- Size: 0.57"W x 0.63"H x 1.23"D

195602CP

213524CP

RJ45: 8P8C   **RJ11:** 6P6C

RJ45

Part No.	Color	1	10	100
195590CP	Red	$3.59	$3.39	$3.19
195602CP	Yellow	3.59	3.39	3.19
195611CP	Green	3.59	3.39	3.19
195629CP	Black	3.59	3.39	3.19
195637CP	Ivory	3.59	3.39	3.19
212951CP	Blue	3.59	3.39	3.19
212943CP	White	3.59	3.39	3.19

RJ11

Part No.	Color	1	10	100
213524CP	Black	$3.59	$3.39	$3.19
213516CP	White	3.59	3.39	3.19

BNC/F-Type/Fiber Optic Jacks

195645CP **195653CP** **195661CP**

SALE

- Removable jacks used in wall plates (see above)
- Clip on for easy installation on wall plates
- Color: ivory • Keystone type

Part No.	Description	1	10	100
195645CP	F-Type female to female	$2.49	$2.25	$1.99
195653CP	BNC female to female	2.29	2.05	1.89
195661CP	ST Fiberoptic	2.45	2.25	2.25

CAT 5e Crossover Cable

- Connect 2 PCs without a hub
- 24AWG (7 x 43) stranded
- Strain relief RJ45 connectors
- 4-pair • 8P8C • UTP

Part No.	Description	1	10	100
169261CP	10' cable RJ45, gray	$6.95	$6.25	$5.59

Bulk Modular Network Cables

- 8 Conductor • UTP
- 4 twisted pairs
- Insulation: polyethylene
- Nom. OD.: 189"
- Nominal impedance: 100Ω

118130CP

Solid: uses modular plug P/N 119343CP, pg 175
Stranded: uses modular plug P/N 79281CP, pg 175
**118130CP/201620CP/201646CP/
201638CP/201611CP:** 7/32 AWG

- Prepackaged and priced in increments of 25' or 100'

24 AWG UTP Category 5e – 350MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
176225CP	Solid (gray)	$5.00	$17.00	$100.00
201603CP	Solid (blue)	5.00	14.00	90.00
176233CP	Stranded (gray)	6.00	21.00	180.00
201574CP	Stranded (red)	6.00	18.00	160.00
201591CP	Stranded (black)	6.00	18.00	160.00
201582CP	Stranded (blue)	6.00	18.00	160.00
201566CP	Stranded (yellow)	6.00	18.00	160.00

24 AWG UTP Category 5 – 100MHz

Part No.	Description	25 ft.	100 ft.	1000 ft.
118113CP	Solid (gray)	$4.59	$16.49	$129.50
201654CP	Solid (blue)	4.00	11.00	100.00
118130CP	Stranded (gray)	5.95	19.35	164.50
201620CP	Stranded (red)	2.75	9.80	89.00
201646CP	Stranded (black)	5.50	15.00	140.00
201638CP	Stranded (blue)	5.95	19.35	164.50
201611CP	Stranded (yellow)	2.75	9.80	89.00

Modular Jack Boxes & Wall Plate

Fig. 1 W: 2.8" H: 4.5" (72311CP)
Fig. 2 W: 2.0" H: 2.2" D: 0.9" (71651CP)
Fig. 3 W: 1.5" H: 2.4" D: 1.1" (213031CP)
Fig. 4 W: 2.4" H: 2.4" D: 1.1" (213049CP)

Part No.	Description	Fig.	1	10	100
72311CP	6P6C & 8P8C double wall jack plate w/ jacks (beige)	1	$1.95	$1.75	$1.57
103464CP	6P4C adhesive jack RJ11 (beige)	2	1.39	1.19	1.09
71984CP	6P6C adhesive jack RJ11 (beige)	2	1.39	1.19	.99
71651CP	8P8C adhesive jack RJ45 (beige)	2	1.95	1.65	1.45
213031CP	8P8C adhesive jack RJ45 (single, white) (CAT 5e)	3	3.29	2.99	2.69
213049CP	8P8C adhesive jack RJ45 (dual, white) (CAT 5e)	4	4.15	3.75	3.39

Surface Mount Boxes

Category 5 and 5e

- RJ45
- 8P8C
- 100MHz
- Size: 2.6"L x 3.2"W x 1.2"H

176073CP **213014CP**

Part No.	Description	1	10	100
176073CP	Single jack (beige)	$6.95	$6.25	$5.59
213022CP	Single jack (white, CAT 5e)	6.95	6.25	5.59
176081CP	Dual jack (beige, CAT 5e)	10.99	9.89	8.95
213014CP	Dual jack (white, CAT 5e)	10.99	9.89	8.95

We'll Send It Today!

Place your order by 6PM EST for same business day shipment.

226-Piece Network Connector Kit

Every connector needed by a network field technician to repair a network.

• Size: 10.5"L x 7.0"W x 1.5"H   • Weight: 2.5 lbs.
This kit includes:

Quantity	Connector Type
50 pieces (each)	RJ11 solid flat cable (6P4C) RJ11 solid flat cable (4P4C)
25 pieces (each)	RJ11 solid round cable (6P4C) RJ45 solid round cable (8P8C) RJ45 solid flat cable (8P8C)
20 pieces	RJ45 protection caps (assorted colors)
5 (each)	BNC for RG58/U cable BNC for RG59/62/U cable BNC for RG174 cable BNC 50Ω terminator BNC Female-to-female adapter BNC T-adapter male-female-female
1 piece	Storage kit

Part No.	Description	1	10
207079CP	Network connector kit	$69.95	$62.95

Network Starter Kit - Easy/Fast

Everything you need to set up a simple network. No need to worry about compatibility or complicated installations.

• Single chip controller on PCI network card complies to bus specification 2.1
• Conforms with IEEE standards
• Shielded RJ45 connector on network card
• On-board socket for an optional remote boot ROM
• LED diagnostic to monitor network conditions
• 5-port hub supports 10/100Mbps
• Auto negotiation capability
• Up-link port for expansion
• Power, link/active/speed, FDX/collision indicators for network status

Includes: Two each PCI network cards, Two each 15 feet straight-through cables, 5-port mini hub, 7.5VDC @ 1A wall transformer, 3.5" diskette drivers, and manual

Part No.	Description	1	10
208469CP	Network starter kit	$64.95	$58.49

Token Ring-to-RJ45 Adapter

• Easy connection to UTP cabling
• Use type A or B style data connector with RJ45 jack
• Determine cable length (flexibility)
• Dimensions: 2.5"L x 1.0"W

SALE

Part No.	Description	1	10	100
125461CP	Token ring	$8.45	$7.59	$6.85

PCI Ethernet Card

10/100Mbps, Auto Detect

• 32-bit PCI bus mastering for high throughput and low CPU command
• Complies with IEEE 802.3 ethernet standards
• Auto negotiation functions
• Plug & Play installation
• Full duplex and half duplex operation
• Auto set IRQs & I/O address   • RJ45
• LED indicators for link & activity status

Includes: 3.5" disk drivers and manual

Part No.	Description	1	10	25
173606CP	RJ45 (10/100Mbps)	$14.95	$13.49	$12.15

ISA Ethernet Card

10Mbps

• Supports Novell NetWare, Windows® NT, LAN Manager, UNIX TCP/IP, Windows® 95/3.1
• LED indicators for diagnostics   • FCC class approved
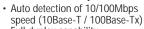
Includes: 3.5" disk driver

Part No.	Description	1	10
144936CP	RJ45 and BNC	$14.95	$13.49

NETGEAR PCMCIA Network Card

Plug into the power of networking – share printers, share access to the internet, send and receive email and messages, drag and drop files between computers.

• Auto detection of 10/100Mbps speed (10Base-T / 100Base-Tx)
• Full duplex capability
• Plug and play, easy installation   • PCMCIA type II
• LED indicator for 100Mbps activity and link activity

Requirements: 486/Pentium® compatible laptop, PCMCIA slot (type II), Windows® operating system

Includes: 3.5" driver software, PCMCIA to RJ45 adapter and RJ45 network cable

Part No.	Description	1	10
210972CP	PCMCIA network card	$29.95	$27.95

Telecom Splice Connectors

• Provides clean, solid, & rapid connection of wires to keep communication lines free of noise

169746CP   169754CP

• Available to handle a wide range of conductor sizes
169754CP: Y-Type
• Prepackaged: order in increments of 10, 100 or 1000

Part No.	Color	Wire Gauge	No. of Conductors	10	100	1000
169746CP	Yellow	22–26	2	$.11	$.10	$.08
169754CP	Red	19–26	3Y	.15	.14	.12

Ethernet 10Base5 to 10BaseT Transceiver

10Mbps

• For 10Mbps CSMA/CD LAN
• FCC class A approved
• LED indicators for power, link, receive and collision
• Size: 2.7"L x 1.6"W x 0.8"H   • One-year warranty

Part No.	Mfr. Cross Ref.	Description	1	10
130315CP	JE5001	10BaseT trans.	$31.95	$28.95

PHOEBE Personal Fast Ethernet Switch Hubs

• Eliminate bottlenecks and improve your home or small business network with true 100Mbps connection from

215634CP

JAMECO's choice as the best performance/value combination in networking – PHOEBE.
• IEEE 802.3 (10Base-T) / 802.3U (100Base-TX) compliant
• Auto MDI/MDIX, auto negotiation RJ45 ports
• Store and forward method
• Packet forwarding rate: 10Base-T – 14880pps to 10Mbps; 100Base-TX – 148800pps to 100Mbps
• 8k media access control (MAC) addresses
• Buffer memory size: 256k bytes RAM
• LED indicator for power and link activity

Includes: 7.5VDC @ 1A power supply, installation guide and mounting hardware

Part No.	Description	Size (LxWxH)	1	10
215634CP	5-port	4.9" x 2.9 x 1.2"	$38.95	$33.95
215642CP	8-port	6.7" x 3.9" x 1.2"	49.95	44.95

19" Rack Mount Patch Panels

208784CP

Our new 12-port and 24-port CAT 5 patch panels feature 110D punch blocks that are compatible with KRONE or 110D tool. UL and CUL listed and certified, CAT 5 certified and can be used with T568 A/B installations. Blocks are color coded for T568 color-coding, and easy wire management.

Part No.	Description	1	10
208768CP	12-port patch panel	$45.95	$39.95
208784CP	24-port patch panel	65.95	59.95

19" Cable Management Racks

Make your cable looms neat and organized with our 2 unit cable management rack. Simply slip in the cable between spaces and route them to their destinations.

208776CP

209031CP

Part No.	Description	1	10
208776CP	Ducting type cable holder	$21.95	$19.95
209031CP	C clamp type cable holder	21.95	19.95

Modular Plugs

103491CP   79290CP   79273CP   79281CP   119343CP

180646CP   116610CP

P = No. of positions
C = No. of contacts
W/E = Western Electric type number

✳ Prepackaged: order in increments of 10, 100 or 1000

Part No.	Description	W/E	1	10	100	1000
103491CP	4P4C (handset)	616	✳	$.11	$.079	$.067
79290CP	6P4C (RJ11)	623	✳	.11	.10	.11
79273CP	6P6C (RJ11)	623	✳	.20	.19	.18
79281CP	8P8C (RJ45) (for stranded wire)	641	✳	.28	.24	.20
119343CP	8P8C (RJ45) unshielded (for solid wire)	—	.49	.44	.35	.28
116610CP	8P8C (RJ45) shielded	—	1.09	.99	.89	.79
204222CP	8P8C (RJ45) shielded (for STP solid wire)	—	1.69	1.55	1.39	1.25
204231CP	8P8C (RJ45) shielded (for STP stranded wire)	—	1.59	1.45	1.29	1.19
116601CP	8P8C (RJ45) shielded (for solid wire)	—	.99	.85	.69	.55
204249CP	10P10C (for STP solid wire)	—	1.69	1.39	1.25	1.09
180646CP	10P10C (for stranded wire)	—	1.39	1.15	.82	.69

Modular Jacks

115128CP   151765CP   105945CP   204169CP

115836CP   204177CP   124038CP   115844CP

204185CP   204193CP   167290CP   203449CP

- PC mount
- Voltage rating: 150 volts AC max.
- Contact current rating: 1.5 amp max. @ 25˚C
- Durability: 750 mating cycles
W/E = Western Electric type number
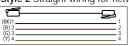
Part No.	Description	W/E	1	10	100
199620CP	4P4C (handset) .48"W	—	$.59	$.49	$.39
115128CP	4P4C (handset) .395"W	—	.37	.34	.31
151765CP	6P4C (RJ11) side flange	AMP	.45	.43	.39
105945CP	6P4C (RJ11) top flange	623	.62	.52	.45
204169CP	6P4C (RJ11) dual	—	1.09	.99	.89
204206CP	6P4C (RJ11) lead wires	—	1.09	.99	.89
115836CP	6P6C (RJ11) side flange	—	.74	.67	.59
204177CP	6P6C (RJ11) dual	—	1.49	1.35	1.19
124038CP	6P6C (RJ11) 6" leads	—	1.25	1.15	.99
115844CP	8P8C (RJ45)	641	.48	.44	.40
204185CP	8P8C (RJ45) w/ key	—	1.15	.99	.89
204193CP	8P8C (RJ45) w/o key	—	1.15	.99	.89
204214CP	8P8C (RJ45) .81"L	—	1.39	1.19	.99
167290CP	8P8C (RJ45) top flange	—	.39	.32	.24
203449CP	8P8C (RJ45) shielded Pin spacing "A" = .055"	—	1.19	.99	.85

Modular Couplers and Adapters

Fig. 1 W: 1.5" H: 0.9" D: 0.7"
Fig. 2 W: 1.1" H: 0.8"
Fig. 3 W: 1.7" H: 1.0" D: 0.9"
Fig. 4 W: 1.0" H: 1.0" D: 2.0"

Cat 5 Coupler!

Style 1 Reverse wiring for telephone systems

(BK)1 (R) 2 (G) 3 (Y) 4

Style 2 Straight wiring for networking/printer sharing

(BK)1 (R) 2 (G) 3 (Y) 4

SALE

Part No.	Description	Fig.	1	10	100
72207CP	6P4C male "T" adapter, Style 2. Provides 2 jacks from 1 line. Male modular plug (6P4C), 2 female modular receptacles (6P4C) RJ11	2	$.99	$.75	$.55
71757CP	6P6C modular coupler, Style 1, RJ11	1	.95	.86	.79
135087CP	6P6C modular coupler, Style 2, RJ11	1	.99	.74	.52
181091CP	6P6C male "T" adapter, Style 2. Provides 2 jacks from 1 line. Male modular plug(6P6C), 2 female modular receptacles (6P6C) RJ11	2	.99	.89	.78
118501CP	8P8C modular coupler, Style 1, RJ45	1	1.95	1.79	1.59
135079CP	8P8C modular coupler, Style 2, RJ45	1	1.39	1.25	1.15
153023CP	8P8C modular coupler, Style 2 (for Cat. 5) RJ45	3	7.99	7.19	6.49
172814CP	8P8C modular coupler, Style 1 (for Cat. 5) RJ45	4	7.49	6.75	6.09

BOMAR "EZ" RJ45 Connector

Strip the wire and insert into the plug and pull out the wire on the other side. This ensures correct conductor order and uniformity in crimping. No wire bar and no wasted cable.

- For solid or stranded wire
- Use standard modular crimping tool
- 8P8C plug

Part No.	Product No.	1	10	100	250
158115CP	RJ45 (8P8C)	$1.75	$1.58	$1.42	$1.25

RJ45-Plug Color Caps (Boots)

Round Strain Relief   Flat Strain Relief   Snap-On Strain Relief
10 Piece Minimum

Part No.	Description	10	50	100
See table below	Cap	$.14	$.12	$.115

Color	Round	Flat	Snap-On
Black	204409CP	204290CP	208442CP
Yellow	204388CP	204311CP	208434CP
Gray	204353CP	204337CP	208426CP
Blue	204361CP	204345CP	208418CP
Red	204425CP	204417CP	208400CP
Green	204396CP	204302CP	208397CP
Ivory	204370CP	204329CP	208389CP

RS-232-to-RJ11/RJ45 Modular Jack Adapters

66181CP   66237CP
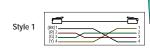
Change your RS-232 port to a RJ11 or RJ45 modular jack. This will allow you to use modular phone cable rather than RS-232 cable, thus simplifying networking applications. Comes complete with all necessary wiring and hardware.

Part Number	Description	Pricing		
		1	10	100
204265CP	DB9 M to RJ11(6P4C)	$1.95	$1.75	$1.49
66181CP	DB9 M to RJ11(6P6C)	2.59	2.35	2.09
66190CP	DB9 M to RJ45(8P8C)	2.49	2.25	2.05
114737CP	DB9 F to RJ11(6P4C)	1.95	1.79	1.59
66202CP	DB9 F to RJ11(6P6C)	2.79	2.55	2.29
66211CP	DB9 F to RJ45(8P8C)	2.99	2.69	2.45
204281CP	DB25 M to RJ11(6P4C)	2.69	2.45	2.19
66229CP	DB25 M to RJ11(6P6C)	2.95	2.35	1.99
66237CP	DB25 M to RJ45(8P8C)	2.99	2.69	2.45
204273CP	DB25 F to RJ11(6P4C)	1.95	1.49	1.05
66245CP	DB25 F to RJ11(6P6C)	2.59	1.95	1.39
66253CP	DB25 F to RJ45(8P8C)	2.89	2.59	2.29

Modular Telephone/Printer Sharing Cables (Gray)

- RJ11 – 6P2C/6P4C for telephone or network
- RJ11 – 6P6C for telephone or printer sharing
- RJ45 – 8P8C for telephone or modem-dial-up use
Style 1 – Reverse wiring for telephone systems
Style 2 – Straight wiring for networking/ printer sharing
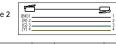
Low Cost Data/ Phone Cables

Style 1
(BK)1 (R) 2 (G) 3 (Y) 4

Style 2
(BK)1 (R) 2 (G) 3 (Y) 4

SALE

✳ 10 pc. min.

Part No.	Conn. Style	Type	Length	Pricing		
				1	10	100
195733CP	1	RJ11-6P2C*	7ft.	$.39	$.35	$.31
189940CP	1	RJ11-6P2C	7ft.	.99	.74	.52
189931CP	1	RJ11-6P4C	1ft.	✳	.09	.06
196226CP	1	RJ11-6P4C	7ft.	1.35	1.19	1.05
115553CP	2	RJ11-6P4C	7ft.	1.25	1.09	.89
205903CP	1	RJ11-6P4C†	14ft.	1.25	1.09	.99
115545CP	1	RJ11-6P4C	25ft.	2.29	2.09	1.85
201232CP	2	RJ11-6P4C†	35ft.	1.95	1.79	1.59
115588CP	1	RJ11-6P6C	7ft.	1.39	1.15	.99
115617CP	2	RJ11-6P6C	7ft.	1.85	1.69	1.49
115676CP	2	RJ45-8P8C	7ft.	1.89	1.75	1.49
115684CP	2	RJ45-8P8C	14ft.	2.95	2.69	2.39

* Black   † Beige

Color Code Legend
New Sale Qty. Save Closeout

Slim-Line D-Sub Gender Changers

18497CP   **56071CP**   **18446CP**

For Confined Applications!

These revolutionary slim-line gender changers are only 0.69" wide, eliminating the space problems caused by standard gender changers. When plugged into your existing cable, they add only 0.44" to the cable. All-metal cases.
• Captive locking screw (male)
• Captive locking nut (female)
• Grounding tangs (male)

Part No.	Description	1	10	100
18497CP	9-pin male	$4.95	$4.49	$3.99
18489CP	9-pin female	4.95	4.49	3.99
56071CP	15-pin male	3.95	3.49	2.95
56063CP	15-pin female	3.95	3.49	2.95
119319CP	15-pin female HD..............	4.29	3.89	3.49
119301CP	15-pin male HD	4.95	4.49	3.95
18446CP	25-pin male	4.95	4.49	3.99
18420CP	25-pin female	4.95	4.49	3.99
170085CP	25-pin M-F	2.95	2.25	1.59

D-Sub 9-Pin to 25-Pin Serial Adapters

10305CP: For use in AT or other computer systems that have 9-pin D-sub serial ports.
153576CP/10321CP/163740CP: For PC/XT systems with DB25 serial ports.
154683CP: 4-40 x .24" hex nut (4)
189632CP: thumbscrews
139985CP: gold-plated contacts, extra long thumbscrews

10305CP

153576CP

Part No.	Description	1	10	100
10305CP	DB9 F to DB25 M	$3.49	$2.59	$1.85
163740CP	DB9 M to DB25 F, thumbscrews on DB9 side only	2.85	2.15	1.55
153576CP	DB9 M to DB25 F, thumbscrews on DB25 side only	3.95	3.45	2.39
10321CP	DB9 M to DB25 F	4.49	3.79	3.19
154683CP	DB9 F to DB25 F	2.49	1.89	1.35
189632CP	DB9 M to DB25 M.............	3.49	3.15	2.85
139985CP	DB9 F to DB25 F	3.95	3.55	3.19

6-Pin Male Mini DIN to 9-Pin Male D-Sub Adapters

152901CP   **100335CP**   **180523CP**

Pin-to-pin connections:

6-pin male mini DIN	1	2	3	4	5	6
9-pin male D-sub						
152901CP	9	—	3, 5	4, 6	8	—
100335CP	1	—	3, 9	2, 5, 7	6	—
180523CP	2	3	5	4, 7	5	—

• Color: beige
• Size: 1.6"L x 1.3"W

Part No.	Description	1	10	100
152901CP	W/ threaded spacer	$3.49	$2.59	$1.99
100335CP	W/ thumbscrew	3.45	3.09	2.79
180523CP	Cable adapter (1 ft.)	1.95	1.79	1.59

Standard D-Sub Gender Changers

16643CP   **22058CP**

• Standard 9- and 25-pin D-sub male and female gender changers for interfacing two cables or connectors of the same gender

Part No.	Description	1	10	100
16635CP	D-sub 9-pin male	$1.95	$1.75	$1.49
16643CP	D-sub 9-pin female	1.95	1.75	1.49
22058CP	D-sub 25-pin male	1.95	1.49	1.05
22074CP	D-sub 25-pin female	1.99	1.79	1.65

AT and PS/2 Keyboard Adapters

159089CP   **159097CP**   **157930CP**

159089CP/189771CP: AT keyboard adapter
• Connects PS/2 keyboard to AT
• 6-pin female mini DIN to 5-pin male DIN

189771CP

159097CP/157930CP: PS/2 keyboard adapter
• Connects AT type keyboards to the PS/2
• 5-pin female DIN to 6-pin male mini DIN (PS/2)

Part No.	Length	Housing	1	10	100
159089CP	1.6"	Metal	$3.49	$3.15	$2.85
159097CP	1.4"	Metal	3.49	3.15	2.85
157930CP	1.7"	Plastic/metal ...	3.49	3.15	2.85
189771CP	1.7"	Plastic	3.49	3.15	2.85

15-Pin to 9-Pin VGA Adapter

• Adapts 15-pin VGA to 9-pin output
• Male HDDB15 to female DB9 adapter

Part No.	Description	1	10	100
75264CP	VGA adapter	$4.45	$3.95	$3.55

Laptop Computer Power Cord

• 2-conductor power cord for laptop computers
• 18/2 AWG • 6' cord
• Flat junior duty type cord

Part No.	Description	1	10
189587CP	6' laptop power cord	$2.95	$2.49

Macintosh® to IBM Monitor Adapters and Cables

Allows use of Macintosh® computer with IBM monitor (DA15 male to HDDB15 female).
126439CP:
• 10 position DIP-switch supports 6 kinds of signal modes and resolutions
• Size: 2.0"L x 1.5"W
• One-year warranty
183345CP:
• DA15 female to HDDB15 male
• Size: 2.2"L x 1.6"W x 0.6"H

126439CP

Part No.	Description	1	10	25
126439CP	Mac to IBM adapter ..	$8.95	$7.95	$6.95
183345CP	Mac to IBM (SVGA)	4.95	3.69	2.59

Full Handshaking Null Modem Adapters

Self-contained null-modem (cross-over) adapters. Change any standard straight cable into a null cable quickly and easily.
Internal pin configuration:
26260CP/17224CP: 1-1, 2-3, 3-2, 4-5, 5-4, 6-20, 20-6, 7-7, 8-20
26243CP: 1-1, 2-3, 3-2, 4-8, 8-4, 5-8, 8-5, 6-20, 20-6, 7-7

26260CP

Part No.	Description	1	10	100
26260CP	DB25 M to DB25 M	$2.19	$1.99	$1.79
26243CP	DB25 M to DB25 F	4.49	4.05	3.65
17224CP	DB25 F to DB25 F	3.49	2.95	2.49

IEEE 1284 Parallel & Serial Cables for High Speed

The IEEE 1284 is the standard in high speed printing. Compatible w/ bidirectional communication data flow resulting in speeds up to 10 times faster than conventional applications.

SALE

130067CP

• Double shielded with 28 AWG stranded twisted pair inner conductors   • Molded shells, PVC plastic
• Color: beige (P/N 130067CP/168233CP); black (P/N 161630CP); gray (P/N 172304CP)
• Weight: 0.6 lbs.

Part No.	Description	1	10
130067CP	6' DB25 M-Cent. parallel 36M..	$11.95	$10.95
172304CP	6' DB25 M-micro Cent. 36M	2.05	1.85
168233CP	6' DB25 M-F parallel cable	6.95	5.95
161630CP	10' DB25 M-M serial cable	14.95	13.49

IEEE 488 Cables

A variety of cable lengths are offered to ensure that the IEEE system requirements are met (20 meters maximum length with a maximum of 15 devices). These cables are standard IEEE 488 cables with stackable 24-pin GPIB connectors on both ends.

73154CP

• Color: gray

Part No.	Description	Wt. (lbs.)	1	10	25
73154CP	1 meter	0.8 ..	$36.49	$32.79	$29.49
115781CP	2 meter	1.2	37.95	34.19	30.95
115801CP	4 meter	2.0	34.95	26.25	18.39

Apple Macintosh® Printer Cables

SALE

10604CP   **130024CP**

Part No.	Description	1	10	50
10604CP	6' mini DIN8M	$4.95	$4.45	$3.99
130024CP	10' mini DIN8M	5.99	5.39	4.85

See the yellow and green highlighted items.

Jameco Special Values!

Details on page 4.

Power Strip Saver Single Outlet

With our high quality power strip outlet saver, you can use all the outlets on your surge suppressors, UPS, and outlet strips. Just plug a bulky power adapter into this cable and free up your other outlets.

Before
Two Outlets Blocked

After
Every Outlet is Usable

Part No.	Description	Length	Cord Type	1	10	100
199777CP	AC Power cord (black)	1'	SVT	$1.69	$1.55	$1.35
208338CP	AC Power cord (beige)	1'	SVT	1.69	1.55	1.35

Power Strip Saver Double Outlet

Get full use of your power strips and UPS outlets with the power strip saver. Plug those bulky adapters into these cables and plug the cables into the power strip. Need the extra adapter to be plugged into the power strip? Use the "Y" power strip saver to add an extra adapter.

Part No.	Description	1	10	100
208346CP	Power strip saver	$2.89	$2.75	$2.59

Automatic Voltage Regulator

LR Series
- Overvoltage and brownout correction LEDs
- Maximum line current: 8A
- 320 joules
- EMI/RFI noise rejection: 50dB
- Size: 6.8"W x 8.4"D x 5.0"H
- $25,000 lifetime equipment protection policy

191302CP

SALE

Part No.	APC No.	Watts	Wt. (lbs.)	1	10
191302CP	LR600	600	12.5	$98.95	$86.59
191290CP	LR1250	1250	17.8	128.39	116.75

Personal Surge Arrest

SALE

Part No.	APC No.	Weight (lbs.)	1	10
191273CP	PER3C	1.3	$16.65	$15.15
191265CP	PER7	2.1	16.49	14.85
191855CP	PER7T	2.3	21.95	19.95

Power Manager-POW6T

- 6 outlets
- 480 joules
- Peak current normal mode: 13kAmps
- Peak current common mode: 26kAmps
- UL1449 TVSS rating: 330V
- $25,000 lifetime equipment protection policy
- Size: 12.5"W x 14.6"D x 1.7"H

SALE

Part No.	APC No.	Weight (lbs.)	1	10
191804CP	POW6TWHT	6.0	$64.95	$58.59

Professional Surge Arrest

PRO8 Series
- 8 outlets with RJ11 modem/fax/DSL protection
- 320 joules
- Peak current normal and common mode: 13kAmps
- EMI/RFI noise rejection: 60dB
- $10,000 lifetime equipment protection policy
- PRO8T2: 8 outlet with RJ11 modem/fax/DSL protection; PRO8TV: 8 outlet w/ coaxial cable and RJ11 modem/fax/DSL protection
- Size: 8.0"W x 5.8"D x 1.8"H

191839CP

SALE

Includes: 5' telephone cable

Part No.	APC No.	Wt. (lbs.)	1	10
191839CP	PRO8T2	2.5	$26.95	$24.59
191791CP	PRO8TV	2.5	31.95	28.79
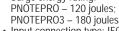
Notebook Surge Protector-PNOTEPRO

- PNOTEPRO: C8 type connector (2-prong); PNOTEPRO3: C6 type connector (3-prong)
- Surge energy rating: PNOTEPRO – 120 joules; PNOTEPRO3 – 180 joules
- Input connection type: IEC 320
- RJ11 telephone protection
- Five-year standard warranty with $5,000 equipment protection policy
- Size: 1.3"W x 4.8"D x 1.5"H

191821CP

SALE

Includes: Manual, 5' telephone cable and Velcro cord

Part No.	APC No.	1	10
191821CP	PNOTEPRO	....	$25.95	23.59
191812CP	PNOTEPRO3	....	25.95	23.59

6-Outlet Surge Protector

- Input: dual 3-prong input plug
- Surge energy capability: 110 joules
- Surge voltage/current capability: 6000V/4500 to 6000A
- Response time: under 1 ns
- Clamping voltage: 400 volts
- Rating: 125VAC – 15 Amps

Part No.	Description	1	10	25
195848CP	6-outlet protector	$4.95	$4.49	$3.95

6-Outlet Surge Protectors

156857CP: Plastic
- Max. spike current: 18,000 amps, 400 joules
- 3-prong, 4' power cord
- Size: 10.3"L x 2.0"W x 1.5"H

156857CP

20175CP: Metal
- Max. spike current: 4500 amps, 50 joules
- 3-prong, 4' power cord
- Size: 12.3"L x 2.4"W x 1.3"H

20175CP

Part No.	Description	Wt. (lbs.)	1	10	100
156857CP	Plastic pwr strip	1.0 ..	$7.95	$7.15	$6.39
20175CP	Metal pwr strip	1.5	9.85	8.85	7.85

Compact Surge Protector For Notebook Computers

- Single 3-prong receptacle outlet; and telephone modem protection
- 3-prong wall mount type
- 210 joule rating
- Surge LED indicator
- RFI noise blocker
- Size: 2.3"W x 1.3"D x 3.3"H

Includes: 4' RJ11 cord
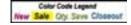
SL WABER

Part No.	Description	1	10	25
206279CP	Single outlet protector	$6.95	$6.25	$5.59

Phone 1-800-831-4242   Fax 1-800-237-6948

Order Anytime 24x7x365

Online www.Jameco.com

TRIPP·LITE isobar® Surge Protectors

139686CP

74544CP

19001CP
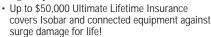
185113CP

The world's best known, most advanced surge protectors provide total protection against surges, spikes and line noise.

- Up to $50,000 Ultimate Lifetime Insurance covers Isobar and connected equipment against surge damage for life!
- Diagnostic indicators on Ultra versions alert you to improper outlet wiring, loss of AC power, and damage to protection circuitry
- "Cascade Circuitry" allows you to chose increased noise protection level for your most sensitive equipment
- UL 1449 and 1283 listed
- Lifetime warranty
- IsoTel model has dual RJ11 jacks for complete modem/fax surge protection
- 2, 4 & 6-outlet protectors: 6' cord; 8 and 12-outlet protectors: 12' cord

ULTIMATE LIFETIME INSURANCE

MADE IN USA

Isobar Premium 19" Rack Mount Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
139686CP	IBAR12RM	750	12 outlet, 2 isolated filters	4.7	$119.95	$107.99

Isobar Premium Surge Protectors

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
18981CP	ISOBAR 4	2200	4 outlet, 2 isolated filters	2.4	$49.95	$44.95
74544CP	ISOBAR 6	2350	6 outlet, 3 isolated filters	2.7	54.95	49.95

Isobar Ultra Premium Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
19001CP	ISOBAR 8U	2350	8 outlet, 4 isolated filters	3.5	$69.95	$62.95

Isotel AC/Phone Line Surge Protector

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
185113CP	ISOTEL 4U	2700	4 outlet, 2 isolated filters	2.7	$39.95	$35.95

TRIPP·LITE Standard Surge Protectors

168954CP

124337CP

32045CP

SALE

Economical and effective spike and noise suppression with diagnostic LEDs.

168954CP: $5,000 Ultimate Lifetime Insurance
124337CP/32045CP: $35,000 Ultimate Lifetime Insurance

Part No.	Product No.	Joules	Description	Wt. (lbs.)	1	10
168954CP	Striker 7	480	Up to 27,000 amp spikes	1.2	$8.95	$8.49
124337CP	Super 7	1402	Up to 42,000 amp spikes	1.6	17.95	15.95
32045CP	Super 8	1200	Up to 54,500 amp spikes	1.7	25.95	23.39

Power Base Surge Protector

- Maximum surge voltage: 6000V
- 5 switched AC power outlets, 1 unswitched and 2 RJ11 ports
- Max. energy dissipation: 50 joules/MOV, 150 joules

SALE

Part No.	Size (W"xD"xH")	Agency	Wt. (lbs.)	1	10
20159CP	13.9 x 12.7 x 1.7	UL	7.1	$14.95	$13.49

TRIPP·LITE Battery-Backed UPS Systems

- Protects your PC, fax/modem and all peripherals against all types of power problems
- Automatic system shutdown with free PowerAlert software for 500VA and 700VA
- Up to $25,000 Ultimate Lifetime Insurance for connected equipment
- Up to 45 minutes runtime

191521CP: 6-outlets, RJ45 for network protection
185130CP/185148CP: 6-outlets, RJ11 for fax/modem protection

191521CP

SALE

185130CP

Part No.	Product No.	Description	Agency	Wt. (lbs.)	1	10
191521CP	IO300	300VA, 6 outlets	UL/CUL	4.5	$75.95	$68.45
185130CP	IO500	500VA, 6 outlets	UL/CSA	16.0	119.95	107.99
185148CP	IO700	700VA, 6 outlets	UL/CSA	20.0	179.95	159.99

POWERWARE 300-VA UPS System

With Dual Outlet

- Protects against blackouts and brownouts
- Battery charging: less than 6 hours to 90% usable capacity
- Battery backup time: 5–10 mins. @ full load; 10–20 mins. with partial load
- Input voltage: 120VAC @ 60Hz
- Output voltage: 120VAC
- Output current: 2.5 amps (full load)
- Size: 3.4"W x 5.8"D x 13.2"H
- Weight: 12.4 lbs.

Part No.	Product No.	Description	1	10
179961CP	PRB300A	300-VA UPS system	$59.95	$53.95
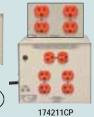
BUSSMANN Line Conditioners

- Protects equipment from normal mode and common mode transients and noise
- Controls high frequency circulating ground currents
- Designed for computer equipment, telecommunications equipment, instrumentation equipment

174191CP: 4-receptacle
174211CP: 6-receptacle

174191CP

174211CP

Part No.	Bussman No.	Load Current	Watts	Size (W"xD"xH")	Wt. (lbs.)	1	10
174191CP	IPS06005R	5A	600	5.3 x 6.0 x 9.0	16.7	$49.95	$44.95
174211CP	IPS02000R	16.0A	2000	7.3 x 8.3 x 13.5	54.9	67.95	61.29

IBM® 8-Outlet Surge Protectors

- UL1449 Transient voltage: 330V
- Clamping voltage: 270V
- 3-line protection
- Electrical rating: 125VAC @ 60Hz
- With integral 15A circuit breaker
- 4 standard/4 transformer outlets
- Max. surge voltage: 6000V
- Sliding outlet cover, LED indicator for surge protection, lighted power switch

191935CP: Max. spike current: 65,000A
209331CP: Max. spike current: 78,000A

191935CP

209331CP

Part No.	Joules	Description	Wt. (lbs.)	1	10
191935CP	1420	Surge protector	2.0	$19.95	$17.95
209331CP	2220	2 RJ11 & 2 RJ45 ports (cables included)	2.2	29.95	20.95

30-Day Money-Back Guarantee

If you're not satisfied we'll take it back! Details on page 201.

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H8 Portable Data Loggers

Temperature/Relative Humidity/Light Intensity/External Sensor Input

- Sensors included (except external sensor input)
- External input accepts external temperature sensors, AC current, 4-20mA and 0-2.5 VDC
- Requires BoxCar software, right
- Capacity: 7943 measurements total except 194108CP is 32,520 measurements total
- User selectable sampling intervals 0.5 sec. to 9 hours; recording time to one year
- Nonvolatile EEPROM memory retains data even if battery fails
- Internal temperature sensor on 4" wire can extend from case
- Programmable start time/date
- User replaceable battery lasts one year
- Operating ranges: -4˚F to +158˚F (temperature), 0 to 95% relative humidity (non-condensing, non-fogging), 2 to 6000 foot candles light intensity (lumens/ft^2)
- Size: 2.4"L x 1.9"W x 0.8"D

194061CP

194095CP

Part No.	Product No.	Description	1	10
194061CP	H08-002-02	2 channel; temperature/external input	$63.95	$59.95
194079CP	H08-003-02	2 channel; temperature/relative humidity	83.95	79.95
194108CP	H08-006-04	4 channel; external inputs	94.95	85.45
194095CP	H08-004-02	4 channel; temperature/relative humidity/light intensity/external input	93.95	89.95

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External Sensor

Sensors can be plugged directly into the external sensor input jacks of the HOBO® H8 Data Loggers (above).

Temperature sensors:
- Range: -40˚F to +212˚F in air
- Resolution: 0.7˚F @ 70˚F
- Accuracy: ±0.9˚F @ 70˚F
- Response time in still air: 4.5 min. typical

Part No.	Product No.	Description	1	10
194204CP	TMC50-HA	50' temperature sensor	$28.99	$27.55

See page 101 for sensors.

BoxCar Software for Windows®

For Hobo® Data Loggers

Two Windows® applications for logger and data management: BoxCar 3.6 provides basic launch, data readout, plotting and data export capabilities. BoxCar Pro 4.0 is a powerful enhanced version of BoxCar 3.6, offering added features for graphing, data analysis, data export and simultaneous management of multiple loggers.

194167CP

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Easy Logger Set-up:
- Select from predefined sampling intervals (0.5 seconds to 9 hours) or program your own custom intervals
- Set start time and memory modes (stop when full, wrap-around when full)
- Check battery status
- Export data to Microsoft Excel, Lotus 1-2-3, or any ASCII compatible programs

BoxCar 3.7:
- Tool bar provides easy access to commonly used functions
- View data in tabular and graphical formats
- Display multiple plot windows at once

BoxCar PRO 4.0:
- Powerful graphing capabilities allows user to compare multiple parameters on one graph. Use the zoom and axis-control tools to focus in on the data of interest
- Analysis functions can be used to extract key information from logged data
- Other features include long file names, print preview, print graphs and series details, and multiple logger launch

Part No.	Product No.	Description	1	10
194159CP	BC3.7-ON	BoxCar 3.7	**$13.95**	$13.30
194167CP	BCP4.0-ON	BoxCar PRO 4.0 ..	94.95	89.95

Industrial Communications

ATEN

RS-232 to RS-485/422 Bidirectional Converters

- Cable length: 4000' max.
- Data rate: 1MB/second
- 4-wire full duplex or 2-wire half duplex
- Controlled by RTS signal
- DCE and DTE selectable
- Point-to-point and multidrop operations
- RS-485: terminal block and RJ11 connections
- RS-232: DB25 female connector
- Input: 110VAC; except P/N 129218CP 220VAC input
- Weight: 0.9 lbs.
- One-year warranty

117701CP

Now a European Version!

197931CP: port powered
- Data rate: 100kbps

122956CP: features RS-485SI optical isolation: 2000V

129218CP: features 220VAC input

Includes: 9VDC @ 300mA power adapter

Part No.	Description	1	10
117701CP	RS-232-485/422	**$57.95**	$51.95
197931CP	RS-232-485/422	69.95	62.99
122956CP	RS-232-485/422 OPT ISO	119.99	107.99
129218CP	RS-232-485/422 (220 VAC)	42.95	36.95

PCI GPIB IEEE-488.2 Board

PCI Bus
- 1 MB/s transfer rates
- 1024 word FIFO buffer

Part No.	Mfr. Cross Ref. No.	1	10
177121CP	PCI-GPIB-1M	**$398.95**	$358.95

ISA GPIB Interface Card

- On-board firmware ROM callable for user's application program
- Complete Listener/ Talker/Controller (LTC) capability
- ISA Bus
- 6 interrupt levels
- Data transfer rate over 300k bytes/sec.
- RF-shielded IEEE-488 receptable
- Selection of 3 DMA channels using host DMA controller
- Size: 5.0"L x 4.2"W

Part No.	Product No.	Description	1	10
136696CP	AX5488	GPIB card	**$189.95**	$169.95

ISA 48-Bit Digital I/O Card

- 48 TTL/DTL I/O lines; 8-bit ports
- Software programmable
- Interrupts: jumper-selectable to IRQ 2, 3, 4, 5, 6 or 7
- Buffer for high sinking capacity
- Added pull-up resistor: CMOS/DRY CONTACT compatible
- ISA bus
- IBM PC/XT and higher compatible
- Size: 10.2"L x 3.9"W
- One-year warranty

Part No.	Description	1	10
136784CP	48-bit digital I/O card	**$109.95**	$98.99

Over 99% of our products are in stock!

We'll Send It Today!

Place your order by 6PM EST for same business day shipment.

Color Code Legend
New Sale Qty. Save Closeout

The Basics of PC-Based Data Acquisition, Analysis, and Control

Using your PC as a platform for the acquisition, analysis and control of physical data is both powerful and economical. Simply adding a card with analog and digital data acquisition and control capability, or a module connected via a serial port, along with easy-to-use software, turns your desktop or laptop computer into a sophisticated instrumentation system.

A PC-based data acquisition and control system is comprised of five fundamental elements: sensors/transducers, analog-to-digital conversion with signal conditioning, digital sensing, analog and/or digital control, and software. The first consideration is the physical parameter or condition you wish to measure & record;

it could be temperature, pressure, acceleration, vibration, sound intensity, and much more. Transducers convert physical parameters to electrical signals. Many transducers require signal conditioning (amplification, filtering, etc.), which is usually provided by the data acquisition card.

For most PC-based data acquisition systems, analog-to-digital conversion is typically handled with a plug-in board or card – commonly known as DAQ boards (PCI, ISA or PCMCIA type). Alternately, a DAQ module connected via a serial port can be used. The key function of a DAQ board or module is to convert the analog signals coming in from the sensors into digital

See Sensors On Page 101

signals with which the PC can deal. The primary specifications to look for are number of channels, resolution, and sample rate.

Virtually all DAQ boards and modules also have the capability of sensing digital input signals; for example, switch contacts. These signals are often used to initiate acquisition of analog data.

Once the data has been acquired & processed by the PC, the analog and digital output capability of a DAQ board can be used for control; i.e., "closing the loop".

A popular software program, SoftWIRE, is built in two windows. The first window holds the graphical program while the other window holds the user interface on a Visual Basic form.

PC-Based Data Acquisition Software

Visual Basic Universal Library & Graphical Programming Software for Measurement Computing Boards

194010CP: The Universal Library is a library of 65+ syntax commands in different programming languages. The library provides these commands plus the syntax format in its respective language.

194028CP: SoftWIRE is a graphical programming package for Visual Basic; one window holds the graphical program while the other holds the user interface on a Visual Basic form. By simply using the 130+ functions included with the software, you can click on the function, make connections to the controls with wires, provide your options, then run the program. While you are creating all these functions and connections, the software also provides the code in Visual Basic.

System requirements:
- PC with Pentium® 90 or higher
- Windows® 95/98/2000/ME/NT4.0
- Microsoft® Visual Basic 6.0 or later • VGA or higher resolution monitor
- Any Measurement Computing DAQ or GPIB board (pg 179-181)

Part No.	Description	1	5
194010CP	Universal Library	$48.95	$43.95
194028CP	SoftWIRE/VB-PPD	493.95	443.95

Data Acquisition Direct to Excel

DAS-Wizard is an add-in for Excel that controls your Measurement Computing data acquisition board and places your measurements directly into the cells of an Excel worksheet. A simple dialog box allows you to configure the data acquisition board and set the range of cells to place measurements.

System requirements:
- PC with Pentium® 90 or higher
- Windows® 95/98/2000/ME/NT4.0
- Microsoft® Visual Basic 6.0 or later
- VGA or higher resolution monitor
- Any Measurement Computing DAQ board (pg 181)

Part No.	Description	1	10
197851CP	DAS-Wizard	$148.95	$133.95

As Your Needs Change, Jameco Changes with You!

Hundreds of NEW Products

We're constantly updating our selection to make it the most appropriate for your needs. In this catalog you'll find new Components, Solar Products, Batteries, Test Equipment, Tool Kits, Computer Products, Wall Transformers and a significantly expanded selection of Power Supplies and Converters.

8-Channel A-to-D Module with RS-485 Interface

- 8-differential channels
- 16-bit resolution
- Input range: ±150mV, ±500mV, ±1V, ±5V, ±10V and ±20mA
- Sample rate: 10/sec.
- Common mode rejection @ 50/60Hz: 92dB min.
- Overvoltage protection: ±35V

Requires: 24VDC @ 100mA power supply

Part No.	Description	1	10
198125CP	8-Ch. voltage & current	$174.95	$157.49

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

Analog & Digital Data Acquisition and Control Boards

- 8-channel A-to-D   • 12-bit resolution
- ±5V input range   • Z_{in}: 50MΩ
- Software available on page 180

Includes: InstaCal: installation and test utilities software

PCI Bus

- Digital I/O: 3 input/4 output
- Three 16-bit counters
- 50kHz sample rate
- Data transfer: S/W polled, may be IRQ driven
- For terminal board, enclosure and cable, see Group Number 1 below

Part No.	Product No.	1	5
193922CP	PCI-DAS08	$247.95	$222.95

ISA Bus

- Digital I/O: 8 input/8 output
- 2-channel D-to-A (AO version only) 12-bit, ±5V output range
- 20kHz sample rate
- For terminal board, enclosure and cable, see Group Number 1 below

Part No.	Product No	1	5
193906CP	CIO-DAS08/JR	$169.95	$152.99

Digital Input/Output Boards – TTL Level

- Output: 2.5mA @ 0.45V sink, 2.5mA @ 2.4V source
- Software available on pg 180

Includes: InstaCal: installation and test utilities software

PCI Bus

- 24-bit digital I/O
- Three 8-bit ports:
- For terminal board, enclosure and cable, see Group Number 1 below

Part No.	Product No.	1	10
197827CP	PCI-DIO24	$88.95	$79.95

ISA Bus

- 24-bit (P/N 151511CP) or 48-bit (P/N 136784CP) digital I/O
- 8-bit ports
- For terminal board enclosure and cable, see Group Number 2 below

151511CP

Part No.	Product No.	1	10
151511CP	CIO-DIO24	$82.95	$78.95
136784CP	AX5214H	109.95	98.99

Opto-Isolated Digital Input and Relay Output Board

- Input range: 5-24VDC or VAC, 50-1000Hz; Rin: 450Ω
- 8 relay outputs: 5 form-C, 3 form-A (28VDC @ 6A, 120VAC @ 5A; contact R = 100mΩ)
- Opto-isolated inputs: 500V isolation channel-to-channel and channel-to-ground
- For terminal board, enclosure and cable, see Group Number 1 below

197843CP

Part No.	Product No.	1	10
197843CP	PCI-PDIS08 (PCI)	$248.95	$223.95

Serial Communications Boards – RS-422/RS-485

- Configured as COM1, COM2, COM3 or COM4
- RS-422/RS-485 cable length: 1.2km maximum

PCI Bus

- 16C550 UART
- 460kbps
- 2 ports
- PCI bus 2.1 compliant

197915CP

Part No.	Product No.	1	10
197915CP	PCI-COM422/485	$198.95	$178.95
197923CP	PCI-COM422/485-2	248.95	223.95

ISA Bus

- RS-422, RS-232 and I-Loop w/ 16450 UART
- 56kbaud

Part No.	Product No	1	10
197860CP	CIO-COM422	$94.95	$89.95

Terminal Boards, Enclosures and Cables for the Above Boards

Group Number 1

Part No.	Product No.	Description	1	5
193965CP	CIO-MINI37	Terminal board	$68.95	$62.10
193973CP	ENCMINI-37	Enclosure	28.95	26.10
193949CP	C37FF-2	Cable (ribbon)	24.95	22.50
193957CP	CF37FFS-5	Cable (shielded)	34.95	31.50

Group Number 2

Part No.	Product No.	Description	1	5
198192CP	C50FF-2	Adapter cable	$24.95	$22.49
198205CP	CPCC-50M-4	Cable	98.95	69.29

193965CP

193973CP shown with P/N 193965CP (not included)

193957CP

193949CP

198192CP

198205CP

Computer Interface Precision DVM

Single and timer-activated measurement modes turn your PC or laptop into an instant data acquisition system. Using software and documentation provided on diskette, you can change sample parameters, display settings, and store measurement data.

- No external power needed
- Direct full scale analog input range: ±20.000VDC
- 3½ to 6½-digit measurement display
- Self-healing measurement setup configuration during computer power up
- On-the-fly measurement parameters manipulation
- Automatic hardware timing synchronization
- Built-in adaptive smart-noise filtering
- User defined multiplier factor and multiplier unit
- Dual screen modes: engineering (full screen) and meter (half-screen)
- Noise/count measurement mode with built-in statistics capability

Part No.	Product No.	Board Size	1	10
208979CP	MB201A20V	3.2"L x 2.5"W	$99.95	$94.95
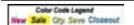
Single Board Precision DVM

Designed for simple programming and parameter changing. With its on-board ALD500 and ALD523 chipset, running on a standard 5VDC power source, you have an economical, high-resolution digital voltmeter. Interfaces with most industry standard 16 x 2 LCD/VFD character display modules via 14-pin direct cable connection. With its on-board 1K EEPROM, you can calibrate and program the unit through a parallel port.

- 3½ to 6½-digit display resolution
- Up to 7 full digits plus sign (+/-9999999) display
- For embedded system applications
- Up to 3 sets of full scale display ranges
- Provisions to convert/scale any DC voltage to user-defined DISPLAY parameters
- Extra port to convert/scale serial digital input date to user-defined DISPLAY parameters   • Software/instructions diskette
- Compatible with P/N 171715CP (pg 95)

Display

Software

Part No.	Product No.	Board Size	1	10
208653CP	MB203A2V	3.0"L x 3.0"W	$109.95	$98.95

5.6" Color TFT Monitor

NTSC Format
- TFT color LCD display
- 224,640 pixel display resolution
- Built-in 1 watt speaker
- Brightness, color and volume adjustments
- Video input: 1.0Vp-p; 75Ω
- Audio input: 2Vp-p; 2kΩ
- Size: 6.1"W x 4.8"H x 1.2"D • Weight: 2.6 lbs.

Includes: RCA cable, mounting stand with hardware and 12VDC @ 500mA power supply

Part No.	Description	1	10
201702CP	5.6" TFT color monitor	$279.95	$259.95

4" TFT LCD Monitor

NTSC Format
- TFT color LCD
- Resolution 234 x 383dpi
- Backlight: cold cathode fluorescent lamp
- Power source: 12VDC @ 400mA
- 5" long lead wire with 4 position molex type power connector
- Tint color and brightness adjustable
- Size: 4.1"L x 3.3"W x 0.7"H (display)
- Size: 4.7"L x 3.3"W x 1.3"H (unit) • Weight: 0.7 lbs.

Part No.	Description	1	10
172742CP	4" color LCD monitor	$159.95	$149.95

Video Text Display Module

NTSC composite (1Vp-p, 75Ω)
- Serial data input: 2400-19.2kbps
- 30-pin SIMM form factor (socket supplied)
- Compatible with Parallax Basic Stamp®, see pg 188
- Auto-switching genlock overlay or internal video generation
- Power supply: +8-16VDC @ 65mA input, 5VDC aux. output (regulated)
- Displays up to 308 characters (11 lines of 28)
- 12 x 18 pixel character pattern
- Asynchronous serial input only @ 9600bps
- Size: 3.5"L x 1.1"H

Part No.	Mfr. Cross Ref. No.	1	10	25
162051CP	BOBII	$69.95	$62.95	$56.65

SMK RF Modulator

- Output frequency: NTSC Ch. 3/4, switch selectable
- 12VDC RF modulator
- Operating voltage: 12V@ 50mA max.
- RF output impedance: 75Ω (F-type connector)
- Video modulation: 1.0V p-p
- Audio FM deviation: 1.4V p-p
- PC connections: solder tab connectors
- Size: 1.7"L x 1.7"W x 0.7"H • MFG. #: WMN2144-01

Part No.	Description	1	10	50	100
141639CP	RF modulator	$4.95	$3.95	$2.95	$2.10

See the yellow & green highlighted items.
Details on page 4.

Jameco Special Values!

SONY® Color CCD Camera

Sony Chipset
- 1/4" Sony super HAD CCD sensor
- NTSC system with 510(H) x 492(V)
- Furnished mini lens: 3.6mm
- Minimum illumination: 0.5 lux @ F2.0
- Signal to noise ratio: >48dB • 330 TV lines
- Supports these functions: auto electronic shutter (AES), auto iris control (AIC), auto gain control (AGC), auto white balance (AWB), back light compensation (BLC) and flicker less (FL)
- Video drive iris control; high/low switchable auto gain control; on/off backlight compensation
- Internal, negative synchronous system
- Video output: 1Vp-p; 75Ω

Requires: 12VDC @ 120mA power supply (recommend P/N 100095CP, pg 53)

Includes: Power/signal cable & mounting hardware

Part No.	Description	1	10
213436CP	Enclosed color camera	$179.95	$161.95

Mini Enclosed Color NTSC Camera

- 1/4" CCD Sensor
- 350 horizontal TV lines
- 1 lux/F2.0
- Electronic shutter: up to 1/120,000 sec.
- NTSC system with 512(H) x 492(V)
- Scanning system: 2:1 interlace
- Signal to noise ratio: 48dB • Lens: 3.7mm/F2.0
- Video output: 1Vp-p, 75Ω • FOV: 92°
- Size: (enclosure) 1.3"L x 1.1"W x 0.9"D
- Weight: 0.3 lbs. • Two-year warranty

Requires: 9VDC – 12VDC @ 500mA power supply (recommend P/N 100853CP, pg 52)

Includes: BNC/Power cable and mounting hardware

Part No.	Description	1	10
215423CP	Mini enclosed camera	$129.95	$119.95

Color Interline Camera

Water Resistant with Adjustable Mounting Bracket
- EIA format
- 1/3" CMOS image sensor
- EIA format: 512(H) x 492(V)
- 330 horizontal line resolution
- 2:1 scanning interlace system
- 5 lux sensitivity
- Video output: 1V p-p; 75Ω • 6mm lens/F2.0
- S/N ratio: 40dB • FOV: 530
- Electronic shutter: 1/60 – 1/1,200 sec.
- Connectors: 1 standard RCA female jack for video, and in-line 2.1mm power-plug connector for power supply • Size: 2.6"L x 0.9"Dia.

Includes: Adjustable mounting bracket, instruction sheet and 9V @ 100mA power supply

Part No.	Description	1	10
185017CP	Color camera	$99.95	$89.95

Color Camera Board

NTSC Format
- 1/3" CCD image sensor
- 5.0 lux • FOV: 92°
- 3.6mm lens/F2.0 • 330 TV lines
- Low power consumption
- Automatic exposure, gain and white balance
- Size: 1.0"L x 0.9"W x 1.1"H

Part No.	Description	1	10
171011CP	Camera board	$69.95	$62.99

SONY® Black & White Low-Light Camera

Sony Chipset
- Lens: 3.6mm
- Signal to noise ratio: >48dB
- Requires 12V power source (not included)
- 6" wires with 4-pin Molex-type keyed connector
- EIA system 537(H) x 505(V)
- Composite output with 420 line resolution
- Shutter speed: 1/60 - 1/1000 • FOV: 92.6°
- Video output: 1.0Vpp composite video/75Ω
- Size: 1.3"L x 1.3"W x 1.0"H
- One-year warranty

150931CP

Part No.	Description	1	10	25
150931CP	Camera board	$89.95	$80.95	$71.95
159071CP	8mm lens 38.6°	17.95	17.10	16.25

Black & White Camera

EIA Format
- 1/3" CCD image sensor
- 510(H) x 492(V)
- Horizontal resolution: >350 lines
- Scanning system: 2:1 interlace
- Sensitivity: 0.7 lux/F2.0
- S/N ratio: 46dB
- Video output: 1Vp-p, composite video 75Ω
- Power supply: 12VDC (recommend P/N 162996CP, pg 53)
- Power consumption: 110mA • FOV: 92°
- Electronic shutter: 1/125,000 sec. (linear)
- Size: 1.3"L x 1.3"W x 1.2"H

Part No.	Description	1	10
171029CP	Camera board	$47.95	$42.95

10" Black & White Security Monitor with Audio

- EIA format
- 9" viewable screen
- Resolution: 700 line
- LED indicator for power
- Push down front panel for vertical hold and size, brightness, volume, and contrast adjustments, power on/off switch
- Horizontal frequency, focus and sub-brightness adjustment, impedance input switch, 1 BNC female & 1 RCA jack for audio/video input/output
- Input voltage: 120VAC @ 60Hz (2-prong 5' cable)
- Size: 9.3"W x 12"D x 9.1"H • Weight: 15 lbs.

Includes: Manual

Part No.	Description	1	10
192719CP	10" black & white monitor ..	$119.95	$83.99

See pages 166 & 167 for Computer Video Cameras, Monitors & Video Capture Cards

Black & White CCD Camera with 6" Monitor

Camera: EIA Format
• 512(H) x 492(V)
• 1/3" CCD image sensor
• 380 TV line resolution
• 6 IR LED light for view in the dark application
• 15.734kHz horizontal synch. frequency
• 2:1 interlace scanning system
• S/N ratio: 48dB
• 1/100,000 second electronic shutter
• 3.6mm lens with F2.0
• Video output: 1Vp-p, 75Ω
• Audio output: 2Vp-p, 50Ω maximum • 0 lux at 2M
• BNC connector for video & RCA connector for audio
• Power supply: 12-15V @ 130mA • FOV: 92˚
• Size: 2.2"W x 2.8"D x 2.1"H

Includes: Camera bracket

Monitor: EIA Format
• 6" 2-channel flat screen monochrome monitor
• Vertical hold, brightness and contrast adjustment knobs at rear of monitor
• Size: 6.7"W x 7.2"D x 5.2"H • Weight: 7.7 lbs.

Includes: 20M audio/video cable, manual and 15V @ 1A center positive power supply

Part No.	Description	1	10
170616CP	Camera w/ monitor	$159.95	$143.95

Mini Dome Color Camera

NTSC Format
• Perfect for ceilings
• 1/4" CCD image sensor
• 512(H) x 492(V)
• 330 horizontal line res.
• 15.73kHz horizontal synch. frequency
• S/N ratio: 46dB
• Scanning system: 2:1 interlace
• Up to 1/96,000 second electronic shutter
• 3.6mm lens with F2.0
• Video output: 1Vp-p, 75Ω
• Power supply: 12VDC @ 160mA (recommend P/N 162996CP, pg 66)
• 2 lux/F2.0 • FOV: 92˚
• Size: 3.5"Dia. x 2.3"H

Includes: Mounting hardware

Part No.	Description	1	10
171037CP	Mini-dome camera	$139.95	$125.95

Mini Indoor Pan & Tilt Mechanism

Continuous Pan
• Automatic scanning: 0˚ – 355˚ angular travel; pan clockwise and counter-clockwise
• Manual tilt: 0˚ - 90˚
• Pan speed: 5˚/sec.
• Maximum load: 4.4 lbs.
• Power consumption: 1 Watt
• Size: 2.5"Dia. x 2.4" H
• Weight: 0.4 lbs.
• Warranty: 2 years continuous use

Camera not included
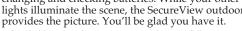
Includes: 24V @ 150mA power supply, wall mount bracket and mounting hardware

Part No.	Description	1	10
215407CP	Mini pan/tilt	$49.95	$44.95

Personal Security Essentials

Security Camera and Decoder

The bulb looks like a standard fixture, but it really contains a miniature camera and transmitting encoder in a sturdy, weatherproof enclosure. Simply screw the bulb-camera into any outdoor light socket, plug the mini-receiving decoder into any TV in your house, and you are ready to watch the piece-of-mind channel. Installation truly couldn't be easier. You'll get a clear birds-eye view of your security perimeter without fishing wires through walls, drilling holes, mounting antennas, or changing and checking batteries. While your other outdoor lights illuminate the scene, the SecureView outdoor camera provides the picture. You'll be glad you have it.

Mini Receiving Decoder

It's a camera!

• Send video signals to over 2000' of 110VAC lines
• 85˚ viewing angle, from 6" to optical infinity • Viewing range up to 100 yards in daylight
• Built-in infrared circuitry will see in total darkness up to a maximum of 30'
• NTSC composite transmitter; NTSC composite and RCA connector receiver
• Transmitter size: standard flood lamp housing • Receiver size: 2.5"W x 2.0"D x 3.8"H

Part No.	Description	Price
219379CP	SecureView outdoor camera and decoder	$199.99

2.4GHz Wireless Fully Automatic Color CCD Camera

With AES/AI Video Drive
• Auto electronic shutter (AES): 1 to 1/100,000 sec.
• Auto iris (AI) control video drive switchable
• Color; NTSC format; 2.0 lux/F1.2
• 380 TV line resolution
• S/N ratio: more than 48dB
• Scanning system: 2:1 interlace
• 1/3" CCD interline sensor
• 512(H) x 492(V)
• Video output: 1Vp-p / 75Ω
• Impedance output: 75Ω typical
• LED power "ON" indicator at rear panel
• Size: 4.0"L x 2.2"W x 2.0"H • Weight: 2.1 lbs.

174810CP: Shown with Lens P/N 208645CP (not included)

Includes: 15VDC power supply, antenna, mounting bracket and manual

208645CP: Auto Iris Lens
• Auto iris direct drive
• FOV: 46˚ • Aperture: ±4F = 1.4 ~ 64
• Use with receivers 169631CP or 192866CP (pg 156)

Part No.	Description	1	10
174810CP	Color camera	$219.95	$195.95
208645CP	Auto Iris lens	69.95	62.95

Color Camera with Audio Microphone

NTSC Format
• Pick-up device: 1/4" CCD image sensor
• FOV: 92˚
• Picture elements: 512(H) x 492(V) lines
• 330 TV line resolution
• Minimum illumination: 2 lux
• Horizontal sync. frequency: 15.734kHz
• Vertical frequency: 60Hz
• Scanning system: 2:1 interlace
• Video output: 1V p-p, 75Ω
• Audio output: 2V p-p max.
• Lens: 3.8mm/F2.0
• Size: 2.9"L x 2.1"W x 2.0"H • Weight: 0.3 lbs.

Requires: 12V regulated power supply (recommend P/N 162996CP, pg 66)

Part No.	Description	1	10
169404CP	Enclosed camera w/ audio	$149.95	$134.95

Color and B&W Cameras

• 1/3" Panasonic CCD image sensor
• Image size: 4.82mm (H) x 3.64mm (V)
• More than 380TV lines horizontal resolution
• 15.734kHz synchronous frequency
• Scanning system: 2:1 interlace
• S/N ratio: more than 46dB • FOV: 42.6˚
• BNC connector for video
• Video output: 1Vp-p; 75Ω
• Size: 4.0"L x 2.2"W x 2.0"H • Weight: 0.9 lbs.

171248CP

171256CP: B&W • 0.3 lux
• 512(H) x 492(V) EIA signal format
• Auto iris: DC driver / AES / video driver switchable
171248CP: Color • 1.0 lux / F1.4
• 512(H) x 492(V) NTSC signal format
• Auto iris: DC driver / video driver switchable

Requires: 12VDC @ 140mA power supply (recommend P/N 162996CP, pg 66)

208645CP: Auto Iris Lens
• Auto iris direct drive
• FOV: 46˚ • Aperture: ±4F = 1.4 ~ 64

Part No.	Description	1	10
171256CP	B&W CCD camera	$109.95	$99.95
171248CP	Color CCD camera	224.95	201.95
208645CP	Auto Iris lens	69.95	62.95

Night Vision Infrared Lighted Camera

EIA Format
• Adjustable camera lens
• Auto iris controlled
• Built-in voltage regulator
• Horizontal sync. frequency: 15.734kHz
• 6 infrared LEDs for night vision
• Scanning system: 2:1 interlace
• Video output: 1Vp-p; 75Ω
• Audio output: 2Vp-p max.
• 380 TV line resolution
• FOV: 92˚ • 0.1 lux with F2.0 • Lens: 3.6mm
• Matching connectors: RG59 BNC (P/N 71271CP, pg 92)
• Size: 2.9"L x 2.0"W x 2.0"H • Weight: 1.2 lbs.

Includes: 12VDC @ 500mA power supply and wall mounting bracket

Part No.	Description	1	10
150404CP	Infrared lighted camera	$119.95	$109.95

2.4GHz Wireless Antenna Booster

Extend Video Transmitting Distance

- Output power:
  700mW (±10%)
- Input power:
  10mW ~ 60mW
- Consumption 350mA
- Impedance output:
  50Ω typical (to antenna)
- Frequency: 2400 – 2500
- Size: 2.2"L x 2.0"W x 0.8"H

215175CP

179872CP

Includes: 9VDC @ 800mA power supply

Part No.	Description	1	10
215175CP	Antenna booster	$199.95	$179.95
179872CP	Wireless extension cable	10.99	9.89

2.4GHz High Gain Directional Antenna

- Indoor and outdoor use
- Gain: 8.5dB
- Impedance: 50Ω
- Weatherproof and
  corrosion resistant
- Distance: 150 – 300ft. (open area)
- Frequency range: 2300 – 2500MHz
- Cable: RG58/U with SMA male connector
- Connector: SMA male
- Cable length: 0.8 ft.
- Size: 4.8"W x 4.8"H x 2.8"D
- Weight: 0.7 lbs.

Includes: Mounting hardware

Part No.	Description	1	10	25
174721CP	Antenna	$129.95	$116.95	$104.95

2.4GHz SMA RF Antenna

Unidirectional

- For use with 2.4GHz cameras,
  transmitters, and receivers
- Gain: 3dB   • SMA male   • Size: 3.6"L

Part No.	Description	1	10
179864CP	2.4GHz antenna	$15.95	$14.35

For RCA and BNC Connectors and Cables see pages 115, 120 & 121.

30-Day Money-Back Guarantee

If for any reason you're not completely satisfied, we'll take it back!

Details on page 201.

Pan/Tilt Controller Box

With Zoom Lens Control

- Input voltage: 115VAC
- Single joy pad and
  auto pan control for
  manual and auto
  pan operations
- Iris, focus, and zoom
  paddle switches for manual and
  auto pan operations
- Use with pan/tilt mechanism, P/N 179899CP, below
- Lens connectors: screw down terminals
- Pan/tilt connectors: 8P mike connector
- Power consumption: 8.5 watts
- Size: 8.6"W x 7.9"D x 1.6"H   • Weight: 4.0 lbs.

Part No.	Description	1	10
179881CP	Pan/tilt controller box	$64.19	$57.75

Indoor Pan/Tilt Mechanism

Continuous Pan

- Auto mode for continuous pan
- Angular travel pan: 355°
- Angular travel tilt: ±60°
  (up/down)
- Input voltage: 115VAC
- Externally adjustable
  limited switch
- Pan speed: 6°/sec.   • Tilt speed: 3°/sec.
- Maximum load: 11 lbs.   • Weight: 4.6 lbs.
- Use with controller box, P/N 179881CP, above
- Size: (overall) 7.5"H x 6.2"W x 5.4"D

Part No.	Description	1	10
179899CP	Pan/tilt mechanism	$199.95	$179.95
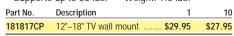
Outdoor Metal Camera Enclosures

- Plate glass: 3mm thick   • Outdoor use

170931CP: without heater
- Clear window area:
  2.5"W x 2.3"H
- Max. camera size:
  4.0"L x 2.4"W x 2.4"H
- Size: 16.0"L x 4.9"W x 4.9"H   • Weight: 2.8 lbs.

170931CP

170940CP: with heater
- Clear window area: 3.5"W x 3.1"H
- Max. camera size: 6.5"L x 3.2"W x 3.2"H
- Size: 11.0"L x 3.6"W x 3.6"H   • Weight: 6.8 lbs.

Part No.	Description	1	10
170931CP	Camera housing	$29.95	$26.95
170940CP	Camera housing w/ heater	69.95	62.95
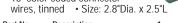
Monitor/TV Wall Mount Brackets

- 95° swivel
- Assembly required
- Requires unit base to
  be mounted securely
  to wall stud
- Wall mount screws
  not included
- Supports up to 66 lbs.   • Weight: 9.0 lbs.

SALE

Part No.	Description	1	10
181817CP	12"–18" TV wall mount	$29.95	$27.95

Mini Alarm Siren

- Sound pressure: 108dB
- Output frequency: 3000Hz
- Rated: 2-12VDC @ 300mA
- Adjustable mounting plate
- 16" color coded connector
  wires, tinned   • Size: 2.8"Dia. x 2.5"L

Part No.	Description	1	10	50
148152CP	Alarm siren	$7.95	$5.95	$4.19

4-Channel 2.4GHz Wireless Audio/Video Transmitter System

CCIR NTSC, PAL, EIA Format

- ISM band:
  2.4–2.483GHz
- Four selectable
  channel transmit-
  ter and receiver
- Audio response:
  20Hz–20kHz
- Antenna mode:
  dipole (omnidirectional)
- Video output: 1V p-p/75Ω composite video
- RCA jacks for audio/video connectors
- Weight: 3.3 lbs.

Includes: Two 12VDC @ 500mA w/ 2.1mm x 5.5mm center positive plug, and patch cables

Transmitter: Size: 3.5"L x 2.5"W x 1.1"H

Receiver: Size: 5.1"L x 4.0"W x 1.0"H

Part No.	Description	1	10
169631CP	4-ch. wireless system	$149.95	$134.95

4-Channel 2.4GHz Wireless Audio/Video Receiver and 10mW Transmitter

Make your camera wireless up to 495 feet!

- Transmission range: 495'
  (150M outdoors);
  198' (50M indoors)
- 4-channel switch
  selectable on transmitter
- Output power
  (transmitter): 10mW
- Output impedance: 50Ω typical
- Video input: 1Vp-p composite
- Audio input: 2Vp-p max.
- RCA jacks for audio
  and video connectors

192858CP

Receiver:
- Video loss detection
  and freeze channel
- Non-volatile memory protects
  system set-up from power loss
- Mute and alarm trigger port
- Size: (transmitter) 4.5"L x 3.2"W x 1.0"H
- Size: (receiver) 6.5"L x 5.5"W x 1.4"H
- Weight: 1.8 lbs.

192866CP

Includes: RCA cable, 12VDC@500mA adapter, RCA to F connector adapter (receiver unit only)

Part No.	Description	1	10
192858CP	4-channel transmitter	$89.95	$79.95
192866CP	4-channel receiver	124.95	112.95

Mounting Brackets for Enclosed Camera

- Material: plastic
- Base mounted w/ 3 screws
- Swivel angle: 360°
- Tilt angle: 90°
- For use w/ enclosed
  cameras (P/Ns 150404CP
  and 169404CP, pg 183)

171002CP:
- Color: ivory
- Max load: 11 lbs.

171002CP   **170982CP**

170982CP:
- Color: white   • Max load: 6.6 lbs.

Part No.	Mfr. Cross Ref. No.	Ht. (in.)	1	10
171002CP	15-B002L	6.4	$6.49	$5.85
170982CP	15-B004	2.0	7.69	6.95

Easy Microcontrol'n

Beginners Guide (Version 4)

Square 1 Publishing A revision of and the successor to Easy PIC'n that covers Peripheral Interface Controller (PIC) PIC16F84, writing programs, interrupts, timing and counting, and much more. (178 pages, 2002)
• Size: 8.5" x 11.0" • Weight: 1.2 lbs.

Part No.	Description	1	10
215061CP	Easy Microcontrol'n	$29.95	$26.95

Microcontrol'n Apps

PIC Microcontroller Applications (Version 2)

Square 1 Publishing This book is a revision and/or the sucessor to PIC'n Up The Pace. Materials covered in the book include talking to a PIC microcontroller with a PC running a terminal, simple data logger and digital voltmeter experiment, PIC16F87x and 10-bit A/D conversion. (437 pages, 2002)
• Size: 8.5" x 11.0" • Weight: 1.7 lbs.

Part No.	Description	1	10
215052CP	Microcontrol'n Apps	$44.95	$40.45

Time'n and Count'n

Intermediate Level PIC Applications

Square 1 Publishing The material and information presented in this book previously appeared in PIC'n Techniques book. The more current PIC16F870 is substituted for the PIC 16C63. Topics such as test equipment for timing and counting experiments to using timer 1 / timer 2, and capture/compare/PWM as well as programs are included in this book. (218 pages, 2002)
• Size: 8.5" x 11.0" • Weight: 1.4 lbs.

Part No.	Description	1	10
210489CP	Time'n and Count'n	$34.95	$31.45

Serial Communications

Serial Communications PIC Applications

Square 1 Publishing Topics such as asynchronous serial communications, RS242 standard, ASCII character code, bit-bang asynchronous communications, synchronous serial communications to name a few are covered in this book as well as tool box modules and applications.(566 pages, 2002)
• Size: 8.6" x 11.0" • Weight: 3.5 lbs.

Part No.	Description	1	10
210497CP	Serial Communications	$49.95	$44.95

Programming & Customizing PICmicro Microcontrollers

Second Edition

McGraw-Hill Details the features of the PICmicro® and how to use these embedded chips to access and control many different devices. Shows what happens within the PICmicro® when an instruction is executed and how it interfaces with external devices.(1190 pages, 2001)
• Size: 9.2" x 7.3" • Weight: 4.0 lbs.
Includes: CD-ROM and PIC PCB

Part No.	Description	1	10
183046CP	PICmicro Programming	$49.95	$44.95

PIC Microcontroller Project Book

Comprehensive Beginner's Guide

McGraw-Hill Provides you with hands-on directions for putting Microchip's RISC-based chips with up to 8k of memory to work. Starting with simple projects and experiments, this book leads you gradually into sophisticated programming techniques. Provides you guidance on getting the equipment you need and programming your chip. (203 pages, 2000)
• Size: 7.3" x 9.2" • Weight: 1.0 lb.

Part No.	Description	1	10
174650CP	PIC Beginner's Guide	$29.95	$26.95

PIC BASIC Programming and Projects

Newnes Publications The BASIC language, as used by the most popular PIC compilers, is introduced from square one, with simple code used to illustrate each of the most commonly used instructions. PIC BASIC is the simplest and quickest way to get up and running – designing and building circuits using a microcontroller. (210 pages, 2001) • Size: 6.1" x 9.2" • Wt.: 0.8 lbs.

Part No.	Description	1	10
200168CP	PIC BASIC Programming	$34.95	$32.95

The Nuts & Volts of BASIC Stamp

This book is useful for newcomers to BASIC Stamps, and seasoned programmers looking for some hardware and software programming tips. With Nuts and Volts easy going style, the BASIC stamp is presented with a series of articles describing PBASIC source code and circuit hints wrapped around a set of real world applications. Over 70 applications featured in this two volume set. (982 pages, 1999)
• Size: 8.5" x 7.5" • Weight: 3.5 lbs.
Includes: CD-ROM
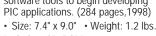
Part No.	Parallax No.	1	10
202315CP	28165	$48.95	$43.95

Programming and Customizing The BASIC Stamp Computer

McGraw-Hill A comprehensive tutorial on the easy-to-use BASIC Stamp single board computer and a primer on electronics. Includes software tools to begin developing PIC applications. (284 pages,1998)
• Size: 7.4" x 9.0" • Weight: 1.2 lbs.
Includes: CD-ROM
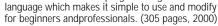
Part No.	Description	1	10
154667CP	BASIC Stamp Book	$34.95	$31.49

BASIC Stamp Data Book

Newnes Publishing Covers both the hardware and software of the Parallax BASIC stamp I and II microprocessor operation and design. The basic stamp is built on PC microcontroller hardware and uses PBASIC as its programming language which makes it simple to use and modify for beginners andprofessionals. (305 pages, 2000)
• Size: 6.0" x 9.2" • Weight: 0.9 lbs.

Part No.	Description	1	10
143651CP	Basic Stamp Data Book	$34.95	$31.49

Easy Step'n Version 1.0

Square 1 Publication Provides the experimenter on how to determine important electrical and mechanical specifications of a motor using simple, easy to build test equipment, design and build microcontroller-based control systems, and driver circuits needed to switch the power applied to stepper motors. (199 pages, 2001)
• Size: 8.5" x 11" • Weight: 1.3 lbs.

Part No.	Description	1	10
199700CP	Easy Step'n Version 1.0	$34.95	$32.95

Programming and Customizing 8051 Microcontrollers

McGraw-Hill Provides you with a complete understanding of the 8051 chip compatibles along with all the information needed to design and debug applications. Covers how to use these embedded chips to access and control many different devices. Includes over 30 experiments, 12 projects and CD-ROM featuring source code and PDF data sheets. (541 pages, 1999)
• Size: 7.5" x 9.2" • Weight: 2.5 lbs.

Part No.	Description	1	10
161402CP	Program/Customizing	$29.99	$26.99

The Microcontroller Application Cookbooks

Woodglen Press - Volume 1
A collection of interface circuits and a reference to circuits and interface code that can be customized for more advanced users. (248 pages, 2000)
• Size: 5.3" x 8.6"
• Weight: 0.7 lbs.

Woodglen Press Volume II
Building on the foundations laid on the first volume, this volume contains schematics with complete part numbers as well as sample "code snippets" that demonstrates how each circuit works. The author has acknowledged Jameco Electronics for providing the components necessary in creating the circuits. (248 pages, 2002)
• Size: 5.3" x 8.3" • Weight: 0.6 lbs.

Part No.	Description	1	10
181681CP	Microcontroller Cookbook Vol 1	$29.95	$27.95
212847CP	Microcontroller Cookbook Vol 2	29.95	27.95

Color Code Legend
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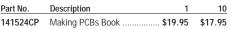
Making Your Own Printed Circuit Board Book

JV Enterprises No darkroom or special equipment needed. Shows steps for drilling and shaping your printed circuit board and the materials you will need. (91 pages)
• Size: 8.5" x 11"
• Weight: 0.5 lbs.

Part No.	Description	1	10
141524CP	Making PCBs Book	$19.95	$17.95

The Microcontroller Idea Book

The Idea Book introduces low end embedded microcontroller design. It provides practical designs for use with data loggers,controllers and small computer applications. (277 pages, 1997)
• Circuits, programs and applications featuring the 8052-BASIC single chip computer
• Size: 7.8" x 10.5" • Weight: 1.6 lbs.

Part No.	Description	1	10
126375CP	Micro. Idea Book	$31.95	$28.95

IC Design Projects

Prompt Publishing Information of how a handful of versatile ICs work. Gives you information about TTL and CMOS ICs, and how power supplies, op amps and phase lock loops work. It also includes schematic diagrams, a step-by-step guide, parts list, and how to test projects such as battery chargers, 5-volt power supplies, DC motor controls and darkroom timers. (261 pages, 1998)
• Size: 7.4" x 9.3" • Weight: 1.0 lb.

Part No.	Description	1	10
153349CP	IC Design Projects Book	$25.95	$23.95

IC Projects for Hobbyist and Technicians

Prompt Publishing Written for hobbyists and technicians who are interested in projects for integrated circuits – projects that you will be able to breadboard quickly and test easily. (212 pages, 1997)
• Size: 6.0" x 9.0" • Weight: 0.7 lbs.

Part No.	Description	1	10
143271CP	IC Projects Book	$24.95	$22.49

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

It's that simple!

Linear IC Pocket Book

Newnes Publishing Dealing mainly with linear ICs such as op-amps, pre-amplifiers, power amplifiers, signal-conditioner and power supply regulators, as well as various hybrid types; it is also a compilation of circuits that can be built as they appear, adapted or used as building blocks. (453 pages, 2000)
• Size: 3.8" x 7.8" • Weight: 0.8 lbs.

SALE

Part No.	Description	1	10
200133CP	Linear IC Pocket Book	$24.95	$22.49

Electronic Pocket Reference

Third Edition

McGraw-Hill Publishing A pocket reference manual that provides definitions, passive component equations and color coding, parameters of standard semiconductors, linear circuits, filters, power supply and regulation, electronic measurement and mathematical tables and formulas. (529 pages, 2000)
• Size: 4.0" x 6.0" • Weight: 0.9 lbs.

Part No.	Description	1	10
174481CP	Electronics Pocket Ref.	$29.95	$26.95

Electronic Circuit Guidebooks

Prompt Publications

Volume 1: Sensors
In this book you will find information needed about typical sensors, along with a large amount of information about analog sensor circuitry. Amplifier circuits are well covered, along with differential amplifiers, analog signal processing and more. (339 pages, 1997)
• Size: 7.4" x 9.3" • Weight: 1.3 lbs.

Part No.	Description	1	10
140732CP	Sensors	$31.95	$28.95

Volume 2: IC Timers
This book demonstrates the theory of how various timers work by way of introduction to resistor-capacitor circuits, in-depth chapters on TTL and CMOS digital timers, the LM-555, and other IC devices, op amp timer circuits, retriggerable and long duration timers. (240 pages, 1997)
• Size: 7.3" x 9.3" • Weight: 1.0 lb.

SALE

Part No.	Description	1	10
146966CP	IC Timers	$24.95	$22.49

DSP Filters – Designing and Applying

Prompt Publishing Breaks down design complexity issues through the use of simplified tutorials and step-by-step instructions along with a collection of projects. The author presents the design formulas needed to build the digital equivalent of standard audio filters – low, high,band-pass, and band-stop. Includes the more specialized peaking and shelving filters. (344 pages, 2001)
• Size: 7.5" x 9.3" • Weight: 1.4 lbs.

Part No.	Description	1	10
190473CP	DSP Filters Book	$40.95	$36.89

Digital Logic IC Pocket Book

Newnes Publishing A handy reference guide to modern 74 series and 4000 series digital logic ICs presents 620 useful and carefully selected circuits, diagrams, graphs and tables. 185 TTL and CMOS ICs provide detailed information and practical applications. Aimed at design engineers and technicians, this pocket book is also useful to amateurs and students. (400 pages, 1996)
• Size: 3.8" x 7.8" • Weight: 0.8 lbs.

Part No.	Description	1	10
200141CP	Digital Logic IC Pocket	$29.95	$26.95

Robot Builder's Bonanza

TAB Publishing This fascinating guide offers you a complete, unique collection of tested and proven project modules that you can mix and match to create an almost endless variety of highly intelligent and workable robot creatures. (753 pages, 2001) • Size: 7.3" x 9.2" • Wt.: 2.5 lbs.

Part No.	Description	1	10
137171CP	Robot Builder's Bonanza	$23.95	$21.45

Robot Builder's Source Book
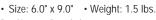
McGraw-Hill Everything you need to find – and acquire – common and uncommon robotic parts and supplies. Jameco Electronics and over 2500 mail order suppliers and other sources, including local and international businesses, cross-referenced and categorized to make your search quick and easy. (711 pages, 2003)
• Size: 8.5" x 10.0" • Weight: 3.9 lbs.

Part No.	Description	1	10
213461CP	Robot Builder's Source Book	$19.95	$17.95

Programming Robot Controllers

McGraw-Hill Tells you everything you need for your robot to perform to specification and expectation – and for you to fully understand how robot controllers are programmed using the versatile Microchip PICmicro 16F27. CDROM included. (456 pages, 2003)
• Size: 6.0" x 9.0" • Weight: 1.5 lbs.

Part No.	Description	1	10
213452CP	Prog. Robot Controllers	$19.95	$17.95

TTL Logic Data Book

Texas Instruments Contains specifications and technical information on a broad line of TTL integrated circuits including Schottky TTL circuits. (1240 pages, 1988)
• Size: 6.0" x 8.5" • Weight: 2.6 lbs.

Part No.	Description	1	10
88225CP	TTL Logic Data Book	$34.95	$31.49

See page 191 for robotic kits

CMOS Sourcebook with CD-ROM

Prompt Publishing CMOS gives you the option to use simple technology and eliminate over-design. This book contains a CD-ROM with datasheets for the CMOS 4000 family and information on how to interface CMOS with SCRs and TRIACS. (390 pages, 2001)
• Size: 7.4" x 9.3" • Weight: 1.6 lbs.

Part No.	Description	1	10
199654CP	CMOS Sourcebook	$39.95	$37.95

Controlling the World with Your PC

Hightext Publishing Make your PC control stepping motors, monitor fluid levels, or switch appliances on and off! Each of the circuits in this book connects directly to the parallel printer port of your PC and comes complete with a circuit diagram and listings for control software written in Pascal, C and BASIC. (257 pages, 1994)
Includes: 3.5" disk
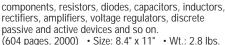
Part No.	Description	1	10
116943CP	Controlling the World	$34.95	$31.49

Practical Electronics Book for Inventors

McGraw-Hill Provides information needed for practical use in a format you can understand. With hand-drawn illustrations, this learn-as-you-go guide shows you what a particular device does, looks like and compares with other similar devices. Provides an easy-to-understand overview of basic components, resistors, diodes, capacitors, inductors, rectifiers, amplifiers, voltage regulators, discrete passive and active devices and so on. (604 pages, 2000) • Size: 8.4" x 11" • Wt.: 2.8 lbs.

Part No.	Description	1	10
174529CP	Practical Electronics	$39.95	$34.95

Analog and RF Circuits

Newnes Publishing The author of this book, who is one of the leading analog and RF engineers, uses illustrations and examples rather than mathematical theory, presents a wealth of ideas and tips based on his experience. Essential reading for anyone designing analog circuits. Topics include RF amplifiers, oscillator design and behavior, waveform analysis, optoelectronics, filters, and op-amps. (299 pages, 1998) • Size: 7.4" x 9.2" • Wt.: 1.1 lbs.

Part No.	Description	1	10
200150CP	Analog and RF Circuits	$52.95	$49.95

Power Supplies Projects

Prompt Publications Guides you through the fundamentals of power supply design and construction. Includes basics of AC and DC, regulated and unregulated, linear and switching power supplies. (124 pages, 1997)
• Size: 6.0" x 9.0" • Weight: 0.4 lbs.

Part No.	Description	1	10
145453CP	Power Supplies Project	$19.95	$17.95

Parallel Port Complete

Lakeview Research A practical, hands-on approach to PCs and their connections to parallel ports. This state-of-the-art book offers many tips on how to get the most out of your parallel port. Enhanced (EPP) and extended capabilities (ECP) types are covered. (343 pages, 1999)
• Windows® 3.1 and Windows® 95 • PC to PC links
• Selecting cables • Size: 7.0" x 10.0" • Wt.: 1.4 lbs.
Includes: 3.5" diskette

Part No.	Description	1	10
138261CP	Parallel Port Complete	$39.95	$35.95

Serial Port Complete

Lakeview Research RS-232 and RS-485 are the most versatile, inexpensive interfaces for linking, but the hardware and programming are often misunderstood. This book provides you with everything you need to design, program, install and troubleshoot the links you set up. (306 pages, 1998) • Size: 7" x 10" • Weight: 1.3 lbs.
Includes: 3.5" diskette

Part No.	Description	1	10
154771CP	Serial Port Complete	$39.95	$35.95

Electric Motors and Control Techniques
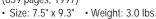
TAB Publishing Explains how different types of motors operate, and how electronic control devices can be used to improve efficiency in a wide range of applications. (294 pages, 1994)
• Size: 7.3" x 9.2" • Wteight: 1.1 lbs.

Part No.	Description	1	10
137162CP	Electric Motors & Control	$16.99	$15.29

Teach Yourself Electricity and Electronics Handbook

McGraw-Hill This book features conversational writing style, quizzes, self-tests and illustrations that make learning easier. You will be able to design basic electronic circuits, determine waveform combinations, calculate power and impedance and much more. (659 pages, 1997)
• Size: 7.5" x 9.3" • Weight: 3.0 lbs.

Part No.	Description	1	10
146982CP	Teach Yourself Electricity	$23.95	$21.59

How to Test Almost Everything Electronic

TAB Publishing Filled with easy-to-follow instructions on how to troubleshoot all types of electronic systems. Learn the many uses of electronic tools, test equipment and troubleshooting techniques using flowcharts. (326 pages, 1993)
• Size: 7.4" x 9.3" • Weight: 1.3 lbs.

Part No.	Description	1	10
126199CP	How to Test Everything	$17.95	$16.15

Oscilloscope Guide Book

Prompt Publishing This book's full illustrations and diagrams bring oscilloscopes to life. Learn how to use them to conduct many tests and measurement techniques. This book answers questions about various types of oscilloscopes and how to obtain useful test results. (214 pages, 2001)
• Size: 7.5" x 9.2" • Weight: 0.9 lbs.
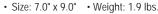
Part No.	Description	1	10
185404CP	Oscilloscope Guide Book	$29.95	$26.95

Everything You Need To Develop Custom USB Peripherals Book

Lakeview (2nd Edition) This USB Complete book provides an easy-to-use interface for computer peripherals. The book covers topics such as what USB can do, transfer types, chip choices, what's inside a USB controller, writing firmware, how the host communicates and more. (523 pages, 1999)
• Size: 7.0" x 9.0" • Weight: 1.9 lbs.

Part No.	Description	1	10
171900CP	Complete USB Book	$49.95	$44.95

Troubleshooting & Repairing Consumer Electronics without a Schematic

TAB Publishing Learn how to locate, test, and repair defective components in audio amplifiers, car radios, cassette decks, TV chassis, compact disc players, power supplies, AM/FM receivers and VCRs. (475 pages, 1997)
• Size: 7.4" x 9.3" • Weight: 1.1 lbs.

Part No.	Description	1	10
136080CP	Consumer Electronics	$22.95	$20.95

Modern Electronics Soldering Techniques Book

Prompt Publishing Learn the art of electronics soldering. The author goes beyond the basic aspects of soldering and thoroughly discusses other key areas of electronics technology such as correct handling and identification of components. Also covered is the art of reading, converting schematics and improving your knowledge of test concepts. (293 pages)
• Size: 6.0" x 9.0" • Weight: 1.0 lb.

Part No.	Description	1	10
185498CP	Modern Electronics	$20.69	$18.59

Corporate Customers

Opening an account is easy!!

Call 1-800-831-4242 for details today

Color Code Legend
New **Sale** Qty. Save

BASIC Stamps — SALE

BASIC Stamps are small computers using a variation of BASIC called PBASIC to control execution of many applications, such as robotics, radio-controlled interface of a digital camera, industrial pallet stacker, health monitoring systems, and much more.

127693CP

130892CP

The BS1-IC has 8 I/O lines, while the BS2-IC has 16 I/O lines which can be connected directly to buttons, LEDs, registers, and many other TTL level devices. Each allows you to store data in the EEPROM before downloading a BASIC program.

See page 94 for Serial LCD Modules

Includes: Embedded BASIC plus instruction sets; basic interpreter, EEPROM (non-volatile), a resonator and 5V regulator

Specifications:	127693CP	130892CP
EEPROM	256 bytes	2048 bytes
RAM	16 bytes	32 bytes
Cur. Draw @ 5V	2mA run/20µA	8mA run/100µA
Microcontroller	PIC16C56	PIC16C57
Program speed	2000/sec.	4000/sec.
# of I/O Pins	8	16 + 2 serial
Package	14-pin SIP	24-pin DIP
Volts Required	5-15VDC	5-15VDC
Size	1.4"L x 0.4"W	1.2"L x 0.6"W

Part No.	Parallax No.	1	10
127693CP	BS1-IC	$33.95	$32.29
130892CP	BS2-IC	45.95	41.95

BASIC Stamp® 2 Starter Kit with BS2-IC (27203)

Design your own project today using this BASIC Stamp kit. Includes the super carrier board, software, manual and programming cable. BASIC Stamp 2 can be connected directly to buttons, LEDs, registers and many other TTL devices.

• Weight: 1.9 lbs.

Inset of Carrier Board

Part No.	Parallax No.	1	10
140071CP	27203 Kit	$139.95	$132.95

BS2P24 Demo Board Module

The BS2P demo board is designed as a low cost platform to test and experiment with the new features of the BASIC stamp 2P24, in particular: Dallas Semiconductor 1-Wire® communications, Philips I2C™ communications, and working with standard parallel LCDs (with Hitachi HD44780 or compatible). The demo board is not exclusive to the BS2P; it is physically and electrically compatible with all 24-pin BS2-series BASIC stamps. The board features:

• 2.1mm center positive power jack
• DB-9 female connector for serial programming
• On-board 5V regulator • Solderless breadboard
• RJ-11 jack for Dallas "Blue Dot Receptor" sockets
• 14-pin IDC connector for LCD
• iButton™ socket • Contrast pot for LCD
• Selector 4.7kΩ pull-ups or pull-downs

Part No.	Parallax No.	1	10
202294CP	45183	$69.95	$65.95

50MHz BASIC Stamp 2SX Module
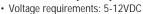
High-speed version of BS2-IC with additional RAM and EEPROM.

• Microcontroller: Ubicom SX28AC
• Program execution speed: 10,000 instructions/sec. • Volts required: 5-12 VDC
• EEPROM program size: 8 x 2k bytes, 4,000 instructions • Scratch pad RAM: 64 bytes
• Current draw @ 5V: 60mA run/200µA sleep
• Number of I/O pins: 16 + 2 serial
• RAM size: 32 bytes • Size: 1.2"L x 0.6"W

Part No.	Parallax No.	1	10	50
159775CP	BS2SX-IC 24-pin	$58.95	$55.95	$53.19

BASIC Stamp 2P Modules

In addition to the BS2-SX (above) features, includes new commands for HD44780 compatible LCDs, Dallas Semiconductor 1-wire and Philips I2C parts.

184911CP

• Voltage requirements: 5-12VDC
• Program execution speed: 12,000 instructions/sec.
• RAM size: 38 bytes (12 I/O, 26 variable)
• Scratch pad RAM: 128 bytes

184920CP

• EEPROM program size: 8 x 2k bytes, 4,000 instructions
• Current draw @ 5V: 40mA run; 400µA sleep
184911CP: Size: 1.2"L x 0.6"W x 0.4"H
• Number of I/O pins: 16 + 2 serial
184920CP: Size: 2.0"L x 0.6"W x 0.4"H
• Number of I/O pins: 32 + 2 serial

Part No.	Parallax No.	1	10
184911CP	BS2P24-IC 24-pin	$78.95	$71.95
184920CP	BS2P40-IC 40-pin	98.95	89.95

BS2P Professional Starter Kit

Provides the engineer with all the parts required to get started with the BSP2 microcontroller. The kit includes a selection of components and ready-to-run source code that will help master some of the exciting new features of the BSP2.

Includes: Programming manual, BS2P demo board, BS2P-24 microcontroller, DB9 (serial) programming cable, PCF8583 chip, 32.678kHz crystal, 24LC32 serial EERPOM, DS1822 thermometer,(3) 4.7K resistor, jumper wires.

Part No.	Parallax No.	1	10
202323CP	27235 kit	$194.95	$174.95
202331CP	BS2P40 adapter	24.49	21.95

BASIC Stamp 2 OEM Kit

A through-hole version of the popular BASIC Stamp modules.

• 20-pin SIP, standard 0.1" spacing
• PC board includes labeled component locations with visible traces between parts
• PBASIC interpreter and EEPROM are socketed to allow for replacement
• Programmed using PBASIC DOS or Windows® editor just like the BASIC Stamp modules

Includes: PBASIC interpreter, EEPROM, resonator, DB-9, resistors and transistors

Part No.	Parallax No.	Price
183071CP	27291 BASIC® Stamp 2 kit	$48.95

Stamp Works Kit

This all-in-one kit takes you beyond theory, into a well-written collection of 32 experiments that will teach you first class BASIC Stamp programming. You'll learn to get the most out of the BASIC Stamp and to increase its versatility by connecting to popular active and passive components.

Includes: Manual, BASIC Stamp Experiment Board, BS2-IC, 2x16 parallel LCD with custom cable, digital multimeter with 2 probes, wire cutter/stripper/pliers, three 100' rolls 22 AWG wire, screwdriver kit, photoresistor, 555 timer, 8-bit serial-to-parallel and 8-bit parallel chips, Dallas Semiconductor 1620 digital thermometer and real-time clock with 32.768MHz crystal, National Semiconductor ADC0831 8-bit A/D converter, Maxim 7219 8-digit LED display driver, National Semiconductor LM358 op-amp, stepper motor, servo, power supply, resistor assortment, capacitors, serial cable, CD-ROM and plastic box for parts

• Weight: 4.0 lbs.

Part No.	Parallax No.	1	10
184946CP	27297	$348.95	$314.95

BASIC Stamp Prototyping Boards

Optional boards for BS1-IC, BS2-IC and BS2SX-IC Stamps.

164726CP

• Easy use of Stamp with prototyping area, 9-volt battery clips, I/O header, reset button, and programming connector
130921CP: Use w/ P/N 130892CP, far left
• Size: 3.0"L x 2.6"W
164726CP: Use w/ P/Ns 127693CP &130892CP, far left and P/N 159775CP, above
• Size: 4.0"L x 3.0"W

Part No.	Parallax No.	1	10
130921CP	27120	$22.95	$20.95
164726CP	27130	48.95	46.55

In-System Programming Kit

This unique development tool programs Scenix SX chips in-system and performs in-circuit source-level debugging. Supports every Scenix Semiconductor chip that is commercially available.

• Includes SX Key software, SX Tech Board, 2 SX 28AC/DP 50 MIPS chips, 1 Murata 50MHz resonator, printed manual, CD ROM, power supply and serial cable
• DB-9 serial connector connects to RS-232 port using serial cable

See Page 67 for Microcontroller Chips

• 4-pin connector on other side of tool plugs into the SX's Vss, Vdd, OSC1 and OSC2 pins
• Windows® 95/98/NT compatible • Size: 0.5" x 1.7"

Part No.	Parallax No.	1	10
176583CP	45180	$174.95	$122.49

50MIPS SX Microcontroller

Part No.	Parallax No.	1	10
162931CP	SX28AC/DP (28-pin DIP pkg)	$5.49	$5.25
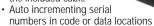
Quickwriter MCU Programmer

TechTools

209040CP

SALE

133911CP

- Programs 4 devices as quickly as a single device when using a gang adapter
- Supports In-Circuit programming with the included cable
- Auto incrementing serial numbers in code or data locations
- Supports existing programming adapters
- Reports individual failures when programming multiple devices
- Enable/disable each programmable area of the MCU
- Select manual programming tasks or "Auto Run"
- Supports 12C5XX, 12C6XX, 12CE5XX, 12CE6XX, 14000, 16C5X/XX, 16C6X/XX, 16C7X/XX, 16C9XX, 16CE6XX, 16FXXX, and 18FXXX series
- Documentation on CD-ROM
- Weight: 1.6 lbs.

Requires: IBM PC or compatible, serial port and Windows® operating system
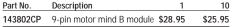
Includes: Quickwriter programming module, DB9 M-F cable, 12VAC @ 1A adapter, documentation and software on CD-ROM

Part No.	Description	1	10
209040CP	Quickwriter programmer	$198.95	$178.95
209314CP	18/28 pin ZIF adapter	68.95	61.95
133911CP	40 pin ZIF adapter	44.95	39.99
209293CP	4-gang 18-pin ZIF adapter	198.95	178.95
209306CP	4-gang 28/40-pin ZIF adtr	198.95	178.95

Motor Mind B Module

Motor control supports one or two line serial communication stream. DC motors with operating voltages as great as 30VDC and continuous currents of 2A can be controlled. An on board frequency counter has a range of 0–65,528Hz. Motor speed (254 steps) and direction can be controlled. Motors with tachometers or encoders may make use of the automated speed control function.

Part No.	Description	1	10
143802CP	9-pin motor mind B module	$28.95	$25.95

Motor Mind C Single or Dual DC Motor Controller

The Motor Mind C has been designed to function as a versatile DC motor control system. The module is ideal for use in small robotics projects for controlling two-wheel axles. The motor connections may also be tied in parallel to control a single larger motor.

- Control 10-24V brushed DC motors
- Maximum continuous current 4.0A
- 40-pin DIP socket package
- Single or dual independent motor control options
- Over-current and over-temperature protection
- Serial control of 10-bit PWM signal
- Alternative analog control (0-5VDC) of PWM signal
- Alternative R/C (1-2ms) pulse control of PWM signal

Part No.	Description	1	10
215546CP	Motor mind C	$58.95	$53.95

Color Code Legend
New Sale Qty Save Closeout

Parallax's "Stamps In Class" Series Kits
Enabling Students to "Micro-Control" the World
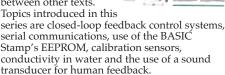
PARALLAX

Learn BASIC Stamp programming essentials from the experts. Each kit combines an educational book with the components needed to cover robotics, process control and microcontroller interfacing. The program emphasizes creative PBASIC programming in the classroom. For use with the "Board of Education" below.

Earth Measurement Kit

SALE

The Earth Measurements curriculum was created as a subsequent test to the "What's a Microcontroller?" guide. Learn new techniques and circuits with only minimal overlap between other texts. Topics introduced in this series are closed-loop feedback control systems, serial communications, use of the BASIC Stamp's EEPROM, calibration sensors, conductivity in water and the use of a sound transducer for human feedback.

Part No.	Parallax No.	1	10
202307CP	28153	$61.95	$55.79

Robotics

Build a BOE-BOT by adding a chassis, servo motors, power supply, and proximity sensor to your Board of Education (right). Experiments cover basic programming and servo control, sensor interfacing using an infrared LED and receiver, light following, and communication between BOE-BOTs.

- Experience: moderate
- 84 piece kit with book

Requires: BS2 starter kit (P/N 140071CP, pg 188)

Part No.	Parallax No.	1	10
170131CP	28154	$119.95	$109.95

Micro PID Position Controller (UPID)

The Micro PID position controller is a stand-alone motor position controller for use with small DC motors. This device provides 32-bit position control of DC motors with quadrature encoders. Four modes of operation allow for use in a wide variety of applications.

- Up to 2A continuous current, 10A peak
- 6-30VDC brushed motors
- Direct position control via 38.4Kbps, 19.2Kbps, or 9.6Kbps serial interface
- Stores up to 16 trapezoidal profile segments, and 3 PID settings
- Analog position control mode (1024 positions) with offset and multiplier functions
- Velocity control mode
- Built in data-logging modes for trapezoidal or direct control operating modes
- Brake, reset, negative limit switch, and positive limit switch inputs
- Custom software simplifies programming & testing
- X4 or X1 quadrature signal decoding

Part No.	Description	1	10
215562CP	UPID position controller	$79.95	$72.95

Line Follower Module

Module comes preassembled and ready to attach to the BOE-BOT (P/N 170131CP) with a simple ribbon cable and male to male header. The module uses a multi-sensor array over which you have complete programmatic control, allowing you to develop line following algorithms that are very simple.

Part No.	Parallax No.	1	10
202340CP	29115	$57.25	$51.55

"Board of Education"

The BOE was designed in coordination with Parallax's educational customers to teach microcontroller programming and interfacing.

More Training Boards on pages 110-111

- Mechanically interlocked power supply to prevent dual connection of wall-pack and 9-volt battery
- DB9 connector for BS2-IC programming and serial communication during run-time
- P0 - P15 I/O pins, Vdd and Vss connections brought adjacent to 2" x 1-3/8" breadboard area
- Traces on top of the board show connections between BS2-IC and breadboard connections

Includes: Set of ten 10 color-coded 22 gauge wires

Part No.	Parallax No.	1	10
162536CP	28150	$54.95	$49.95
202331CP	BS2P40 adapter	24.49	21.95

ICON H-Bridge DC Motor Controller

The ICON H-Bridge provides easy connectivity to a wide range of medium power DC motors. An on-board microcontroller monitors current and temperature to provide protection if either trip point is exceeded. Various configuration registers may be monitored and programmed via the serial interface. These registers contain information such as the system load current, board temperature, over current trip point, over temperature trip point, and status information.

- Control up to 40V brushed DC motors
- Maximum continuous current 12A
- 2.5" x 1.9" PCB with 0.156" female sockets
- Allows logic level control of 4 N-channel MOSFETs
- Serial interface to on board H-bridge monitor
- Current measurement and adjustable current fuse settings
- Temperature measurement and adjustable temperature fuse settings
- Programmable, non-volatile fuse settings

Part No.	Description	1	10
215538CP	ICON H-bridge	$99.95	$89.95

Color Code Legend
New Sale Qty. Save
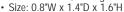
High-Efficiency Robotic Servo

Excellent power-to-weight ratio for robotic projects.
- Supply voltage: 4.8-6 volts
- Torque: 49 oz.-in. @ 4.8V
- Speed: 16 seconds to 60˚
- Can be operated by P/Ns 153648CP, 151001CP, pg 60 and 157059CP, see right
- Size: 0.8"W x 1.4"D x 1.6"H

Part No.	Description	1	10
157067CP	Robotic servo	$19.95	$17.95

Micro Robotic Servo

Perfect size for any micro robotic project such as robotic fingers or pincers.
- Power supply voltage: 4.8-6 V
- Torque: 38 oz.-in.
- Speed: 10 seconds to 60˚
- Can be operated by P/Ns 153648CP, 151001CP, pg 60 and 157059CP, right
- Size: 1.2"L x 0.48"W x 1.2"H

Part No.	Description	1	10
166369CP	Micro robotic servo	$39.95	$35.95

Giant Robotic Ball-Bearing Servo

Extremely powerful! Perfect for large robotic projects where power is a must.
- Power supply voltage: 4.8-6 volts
- Torque: 161 oz.-in.
- Speed: 19 seconds to 60˚
- Can be operated by P/Ns 153648CP & 151001CP, pg 60 and 157059CP, see above right

Part No.	Description	1	10
166351CP	Giant robotic servo	$49.95	$44.95

Spider Couplers

Coupler →
Rubber Spider

162288CP (Coupler);
162000CP (Spider)

- Used with motors
- 1 set screw/hub
- Hub OD: 0.625" Dia.
- Hub length: 0.56"
- Parts sold individually

Part No.	Description	1	10	50
162288CP	.125" (3.18 mm) hub ...	$1.35	$1.25	$1.09
161998CP	.197" (5.00 mm) hub	1.09	.89	.59
162270CP	.250" (6.35 mm) hub	1.35	1.19	1.09
162000CP	Rubber spider	1.05	.94	.85

Climax   Spider Shaft Couplers

209285CP   106606CP   106622CP   138288CP

209285CP/106606CP:
- 1 set screw/hub
- Hub OD: 0.625" Dia.
- Hub length: 0.56"

138288CP:
- 2 set screws (10-32 x 1/8)
- Size: 0.75"L x 0.5"D

Part No.	Description	1	10	100
209285CP	.156" shaft hub	$.85	$.65	$.39
106606CP	.250" shaft hub	.75	.55	.39
106622CP	Rubber spider	.75	.68	.61
138288CP	.250" sleeve coupler	4.49	4.05	3.65

Radio Control System

- 75MHz band • 1/4 mile range
- 2-channel proportional operation
- HP-2RNB mini AM receiver
- 2 HS-303 standard servos
- Size: 7.5"L x 2.25"W x 2.25"H
- Weight: 1.5 lbs.

Requires: 8 AA batteries

Part No.	Description	1	10
157059CP	Radio control system	$89.95	$79.95

8-Pitch Gears and Gear Set

- Works with DC motors with 0.08" shaft diameter
- Heavy-duty plastic construction • Pitch: 0.125"
- Bore size: 0.154" • Material: polyethylene resin

162392CP: 0.15" bore to 0.070" bore
131801CP: 20-piece gear set includes 2 each of the following: T10, T20, T30, T40, T50 and 10 bushings

✽ Prepackaged: please order in increments of 10

162093CP   162392CP   131801CP

Part No.	Description	Bore	Shaft O.D.	Shaft Dia.	Press Fit Gear Dia.	1	10	100
162069CP	10 teeth gear	0.151"	0.48"	0.156 (5/32)"	0.457"	$.69	$.62	$.59
162077CP	20 teeth gear	0.151"	0.875"	0.156 (5/32)"	0.855"	.59	.44	.31
162085CP	30 teeth gear	0.151"	1.27"	0.156 (5/32)"	1.239"	.69	.62	.56
162093CP	40 teeth gear	0.151"	1.67"	0.156 (5/32)"	1.634"	.46	.41	.37
162106CP	50 teeth gear	0.151"	2.07"	0.156 (5/32)"	2.016"	.35	.30	.25
162392CP	Bushing	0.075"	—	0.078 (5/64)"	0.160"	✽	.24	.22

Part No.	Description	1	10	50
131801CP	Gear set – 20 piece (see description above)	$7.99	$7.29	$6.49

16-Pitch Sprocket Set and Chain

- Operates in high humidity and corrosive environments
- Chain links can easily be added or removed to adjust total length
- Chain tension load: 2.0 lbs.

157075CP   157075CP   168276CP

168276CP: 14-piece sprocket set includes 1 each of the following: 8, 9, 10 teeth at ⅛" bore size; 12, 15, 16, 18, 20, 24, 30, 32, 36, 40 and 48 teeth at ¼" bore size

Part No.	Description	1	10	25
157075CP	Drive chain (12" long)	$9.95	$8.95	$7.95
168276CP	Sprocket set - 14 pieces (see description above)	27.95	25.19	22.65

Hub and 48-Pitch Gear Set

- Low coefficient of friction requires little or no lubrication
- Residual stress removed by annealing process

168284CP: 12-piece gear set includes 1 each of the following: 10 teeth at ³⁄₃₂" bore size; 14 and 16 teeth at ⅛" bore size; 20, 24, 30, 36, 44, 54, 66, 84 and 100 teeth at ¼" bore size

157104CP   168284CP
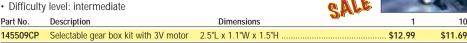
Part No.	Description	1	10	25
157104CP	1/4" bore aluminum mounting hub w/ set screws	$4.95	$4.49	$3.95
168284CP	Gear set - 12 pieces (see description above)	39.95	34.95	31.95

Robot Drive Wheels

- Extremely high traction foam rubber compound
- 2 hubs with mounting hardware
- Size: 2.5"Dia. x 2.0"W

Part No.	Description	1	10
157227CP	Drive wheels (2 pc set)	$27.95	$24.95

Selectable Gear Box Kit

OWI®
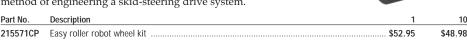
Great 35-piece kit for learning about gear ratios or to add a gear box to your robot project. See-through case has gear ratios from 6.8:1 to 807.93:1.
- Difficulty level: intermediate

Part No.	Description	Dimensions	1	10
145509CP	Selectable gear box kit with 3V motor	2.5"L x 1.1"W x 1.5"H	$12.99	$11.69

Easy Roller Robot Wheel Kit

Designed to simplify mechanical mounting requirements for small robotic projects. This product replaces mechanical mounting systems with a dependable solid structure and provides an easy-to-implement method of engineering a skid-steering drive system.

Part No.	Description	1	10
215571CP	Easy roller robot wheel kit	$52.95	$48.98
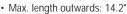
Robotic Arm Trainer Kit ▲ *109-piece kit*

Five Axis of Motion

Teaches basic robotic sensing and locomotion principles while testing your motor skills as you build and control the arm. This unit can be commanded or instructed through its five-switch wired controller with lights to grab, release, lift, lower, rotate wrist, and pivot sideways. Five motors and joints allow flexibility.

Arm

Controller 157366CP

- Max. length outwards: 14.2"
- Max. height upwards: 20.1"
- Max. lifting capacity: 4.6 oz.
- Elbow moving range @ 135˚
- Wrist rotation clockwise or counter clockwise @ 340˚
- Rotates left to right at the base @ 350˚
- Grip opens to 2" wide
- Shoulder movement @ 120˚
- Weight: 4.5 lbs.

Build It Yourself!

159345CP

Requires: 4 D batteries (not included)

Part No.	Description	1	10
157366CP	Robotic arm kit (unassembled)	$74.95	$67.49
159345CP	Robotic controller software (assembled)	84.95	76.49

Speech Recognition Kit & Speech Interface Kit ▲

Program the words you want the circuit to recognize, connect the interface kit to the main board and interface with the robotic arm kit. Now you can command movements to the robotic arm through speech. The heart of the speech recognition kit is the HM2007 IC wherein you can program 40 words @ 0.96 seconds word length or 20 words @ 1.92 seconds word length.

208611CP: Can be used independently

208611CP   **208629CP**

Part No.	Description	Pieces	1	10
208611CP	Speech Recognition Kit	42	$119.95	$107.95
208629CP	Speech Interface Kit	41	89.95	79.95

Robotic Arm PC Interface Kit ▲ *31-piece kit*
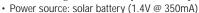
With a PC and the software provided, you can program this interface kit for the robotic arm to do a sequence of movements at precise steps or repeat the sequence.

Includes: DB25 male to female cable & software diskette

Part No.	Description	1	10
208637CP	PC Interface Kit	$69.95	$62.95

Amphibious Solar Vehicle ⬤ *28-piece kit*

This kit introduces the fundamentals of solar power through hands-on experiments. The sun or any intense mobile light can power the solar battery (included). A multiple function switch (solar 1.4V, 350mA) allows this kit to be energized day or night, indoors or outdoors. Its structured "catamaran" design reduces water resistance, thus reducing the possibility of capsizing. It's street tough, water ready, and solar powered.

- Power source: solar battery (1.4V @ 350mA)
- DC motor: 1.9V @ 1.45mA rated

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215853CP	OWI-688	9.5"L x 6.5"W x 3.1"H	1.0	$39.95	$35.95

Robot Builder's Source Book

McGraw-Hill Everything you need to find – and acquire – common and uncommon robotic parts and supplies. Jameco Electronics and over 2500 mail order suppliers and other sources, including local and international businesses, cross-referenced and categorized to make your search quick and easy. (711 pages, 2003)   • Size: 8.5" x 10.0"   • Weight: 3.9 lbs.

Part No.	Description	1	10
213461CP	Robot Builder's Source Book	$19.95	$17.95

Soccer Jr. Kit ⬤ *242-piece kit*

Wire Controlled

New and improved Soccer Jr. kit with the addition of a third motor used to catch and shoot the ball (included). This kit has 6 operational legs, a retrieving and kicking mechanism, and a wired controller to activate movement and ball control. Runs forward, backward, turns left and right, and executes a 360˚ turn.

- Assembled electronic PC board   • 6 legs driven by 2 DC motors
- Power usage: approximately 900mA max.

Requires: 4 AA batteries (recommend P/N 198715CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215861CP	OWI-9820	6.7"L x 3.4"W x 5.5"H	2.0	$44.95	$40.55

Soccer PRO Kit ⬤ *167-piece kit*

Wire Controlled

Soccer PRO kit is the mechanical soccer player's dream kit, for those who thrive speed, excitement, and coordination. Its fast track two wheel motor systems power the unit to create sonic movements and maneuvers, and the third motor catches, carries, and shoots the ball (included).

- Assembled electronic PC board   • Power consumption: 900mA max.

Requires: 4 AA batteries (recommend P/N 198715CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
215870CP	OWI-9850	4.7"L x 5.1"W x 3.0"H	2.0	$44.95	$40.55

Obstacle Avoidance Robot Kit ▲ *107-piece kit*

Six crank motion legged robot utilizes an infrared light sensing system to find obstacles and maneuvers itself aroundthem. This IR detection kit includes an infrared diode, photo diode, IC, 2 DC motors and all hardware.

Part No.	Description	Dimensions	Wt. (lbs.)	1	10
140821CP	Spider kit	12.0"L x 7.0"W x 3.5"H	1.2	$59.95	$53.95

Line Tracking Robot Kit ▲ *134-piece kit*

Watch as this robot follows a black line you specify. Utilizes infrared light to detect the line and control direction. This educational kit utilizes the same line follow principle of many industrial robots.

Part No.	Description	Dimensions	Wt. (lbs.)	1	10
140839CP	Line tracker kit	12.0"L x 7.0"W x 3.5"H	1.1	$49.95	$44.49

Rockit Robot Kit ▲

Explore the fundamentals of robotics with this informative and entertaining robot kit. An intelligent robot with a touch/sound sensor, if it comes in contact with an object or hears a loud noise, it automatically reverses, then turns left.

- Soldering required of PCB   • Size: 4.5"L x 5.0"W x 3.5"H

Requires: 2 AA batteries (recommend P/N 151087CP, pg 200)

Part No.	Description	Pieces	1	10
199603CP	Rockit robot Expert	96	$21.95	$19.55

velleman   **Micro Bug Kits** ■

A bright colored miniature bug shaped robot that is attracted to light.

- Two open chassis sub-miniature motors
- Adjustable light sensitivity that suits almost any light conditions
- LED "eyes" indicate driving direction
- Stops in total darkness
- Size: 4.0" x 2.4"

Requires: 2 AAA batteries (recommend P/N 185279CP, pg 200)

200328CP

200336CP

Part No.	Product No.	Description	Pieces	1	10
200328CP	MK127	Running	26	$18.95	$16.95
200336CP	MK129	Crawling	29	21.45	19.35

Color Code Legend
New Sale Qty. Save
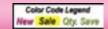
velleman **Parking Radar Kit** ■ *55-piece kit*

Parking in tight places can be difficult, but this unit can tell you when you have come within an adjustable preset distance of the object behind you.

SALE

- Detection range: 5cm – 1.5m; angle: 5˚
- Transmitter frequency: 40kHz
- PCB size: base (4.9"L x 1.9"W) sensor (3.8"L x 1.1"W)

Requires: 10-15VDC @ 16mA max (recommend P/N 100095CP, pg 53) or auto power plug (recommend P/N 115001CP, pg 45)

Part No.	Product No.	1	10	25
129120CP	K3502 .... $39.95		$35.99	$32.39

Ultrasonic Motion Detector Kit ■ *49-piece kit*

Detect motion/movement 13 - 23 ft. away and trigger an alarm w/ this kit.

- 2 boards: one with matched pair of ultrasonic transducers to detect motion from 13 to 23 ft. away; 2nd board contains crystal controlled oscillator & all circuits
- Switchable latch, red LED indicator
- Solder pad output to drive external relay or circuits
- Size: main board: 2.8"L x 2.0"W x 0.8"H; transducer board: 2.8"L x 0.6"W x 0.9"H

Requires: 9V battery (recommend P/N 151095CP, pg 200)

Part No.	Description	1	10
125090CP	Ultrasonic alarm kit $29.95		$26.95

MONDO•TRONICS **Flexinol Muscle Wires®**

These unique nickel-titanium alloy Muscle Wires® actually shorten in length when electrically powered, and can lift thousands of times their own weight. • Length: 1 meter

How it works… Pressing the switch lets power flow from the batteries through the Muscle Wire®, heating it and causing it to contract and raise the lever and lift the weight. When power is removed, the Muscle Wire® cools and relaxes, and the weight helps it return to its starting position.

141348CP: Muscle Wires® Book & Deluxe Kit
- Kit includes one each Flexinol 100, 150 and 250 Muscle Wires® (below) and Project Book
- 3 meters of wire

Includes: Crimps and instructions

SALE

Part No.	Description	Wire Dia. (microns)	Linear Resistance (ohm/m)	Typical Current (mA)	Deform Weight* (grams)	Recovery Weight* (grams)	Typical Rate**	Pricing	
								1	10
141321CP	100LT	100	150	180	28	150	33	$12.95	$11.69
141874CP	150LT	150	50	400	62	330	20	16.95	15.29
160055CP	375LT	375	8	2750	393	2000	4	19.95	17.95
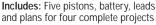
* *Multiply by 0.0098 to get force in Newtons* ** *Cycles per minute, in still air, at 20˚ Centigrade*

Part No.	Description	1	10
141348CP	Muscle Wires® kit $59.95		$53.95

MONDO•TRONICS **Electric Pistons™**

Deluxe 5 Pack

The Electric Piston is a shape memory alloy actuator that pulls with up to one pound of force and contracts by 20mm. Typical activation requires one volt at five amps for two seconds. Plus, mount several pistons in parallel for more strength, and in series for longer strokes.

Includes: Five pistons, battery, leads and plans for four complete projects

Part No.	Description	1	10
141903CP	Electric piston pack (1 volt @ 5 amps) $39.95		$34.95

Flex Sensor

- Maximum resistance: 30kΩ to 40kΩ, proportional to the degree of flexing or bending
- Nominal resistance: 10kΩ
- Applications: virtual reality data gloves, robotic, bio-metric, physics and engineering

Part No.	Description	1	10	100
150551CP	Flex sensor $12.49		$11.25	$10.15

velleman **Scrolling Message Kit** ■ *76-piece kit*

Create your own scrolling message with this 35-LED graphic display kit. Press "SET" to change a particular character, "UP or DOWN arrow" to select the character, and end your scrolling message with the "<" character.

- 35-LED display
- Maximum 16 characters
- Adjustable scrolling speed

Requires: 9 to 12VDC @ 20mA (recommend P/N 202147CP, pg 53)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
200310CP	MK124	3.5"L x 2.6"W x 1.8"H	0.2 .... $24.95		$22.45

velleman **3-Channel Light Organ Kit** ■ *80-piece kit*

Add a 3-channel dancing light display to your music. Each channel displays a different range of sound.

- Frequency ranges are adjustable
- Line or microphone input
- Maximum load 2A per channel
- Each output has individual sensitivity control

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
131684CP	K8017	6.7"W x 5.6"D x 1.7"H	1.2 .... $59.95		$53.95

velleman **Stroboscope Kit** ▲ *19-piece kit*

Make your own snapshots and "lightning" light effects. Flash frequency adjustable from 2 - 20Hz.

- Input: 110VAC

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
117639CP	K5300	3.5"L x 2.6"W	0.5 .... $18.95		$16.95

velleman **Flashing LED Sweetheart Kit** ■ *46-piece kit*

This kit shows a beating heart. Great for decorations!

- Power consumption: 8mA

Requires: 8 to 15VDC wall transformer (P/N 100095CP, pg 53) or 9VDC battery (P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
147555CP	MK101	2.5"L x 2.4"W x 1.2"H	0.1 .... $11.95		$10.95	$9.95

velleman **Flashing LED Kit** ■ *23-piece kit*

Activates 2 flashing LEDs for applications such as model constructions. Adjustable flashing speed by potentiometers.

- 5.5" wire w/ 9V battery connector
- Minimum consumption: 4mA

Requires: 9VDC battery (P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	50
147580CP	MK102	1.3"L x 1.4"W x 0.6"H	0.1 .... $7.95		$7.19	$6.45

Light Sensitive Relay Kit ■ *20-piece kit*

Build a stable and advanced circuit that uses light to control a SPDT 10A relay.

- Dimensions: 2.4"L x 1.3"W x 1.0"H

Requires: 12VDC power supply (recommend P/N 100095CP, pg 53)

Part No.	Description	Wt. (lbs.)	1	10	25
136223CP	Light relay kit	0.1 .... $12.49		$11.19	$9.99

Jameco's Low-Price Guarantee

We'll match the advertised price of any like product.

It's that simple!

CEBEK 1 Second to 3 Minute Timer Module

By operating a button, the relay will be activated for the selected time.

- Output contact rating: 5A @ 200VAC
- Size: 3.0"L x 1.7"W x 1.2"H

Requires: Power supply 12V @ 50mA (recommend P/N 100095CP, pg 53)

Part No.	Description	1	10	25
147871CP	I-1 timer	$19.95	$17.95	$15.95

3 Second On to 1 Minute Off Cyclic Timer Module

By triggering the timer, the contacts will be engaged. Once this time has expired, the relay will remain in the off state for 3-60 seconds. It then restarts, repeating the on and off process until power is disconnected.

- Output by relay
- Contact rating: 5A @ 200VAC
- Size: 3.0"L x 1.7"W x 1.2"H

SALE

CEBEK

Requires: Power supply 12V @ 50mA (recommend P/N 100095CP, pg 53)

Part No.	Description	1	10	25
147846CP	I-10 timer	$22.49	$20.29	$19.39

Pocket Watch B Module

Contains a real time clock, calendar and advanced timing features. Keeps track of seconds, minutes, hours, days, months, and years.

- For use with P/N 130892CP - BS2-IC, pg 188
- Standard TTL • Easy-to-use 1 or 2 wire interface
- Easy-to-use SIP package
- Four types of user configurable alarms
- Leap year compensation
- Externally accessible, precision timebase • One-year warranty

Part No.	Description	1	10
145630CP	Pocket watch B module	$29.95	$28.95

velleman Scrolling Clock Kit ◼ *36-piece kit*

Animated rolling time and date display. Select hours, minutes, month or day with the "SELECT" button and enter values with "SET" button.

- 35-LED display • Size: 2.6"L x 3.5"W x 1.8"
- Time display in 12-hour or 24-hour mode
- Power required: 9VDC to 12VDC @ 20mA
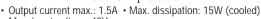
Part No.	Product No.	1	10
200301CP	MK123	$24.95	$22.45

Power Supply and Motor Kits

velleman 1 Amp Power Supply Kit ◼ *12-piece kit*

Provides a regulated voltage adjustable between 1.2 and 35 volts at 1 amp. LM317 regulator gives you remarkably better ripple and regulation characteristics than conventional regulators. Chip includes current limiter and thermaloverload protection.

- Output current max.: 1.5A • Max. dissipation: 15W (cooled)
- Max. input voltage: 40V

Requires: 25.2VCT @ 2A quick connect power transformer (recommend P/N 102103CP or equivalent, pg 45)

Part No.	Product No.	Dimensions	1	10	25
117621CP	K1823	2.1"L x 2.1"W	$12.95	$11.65	$10.49

Dual Adj. Regulated Power Supply Kit ◼ *48-piece kit*

Build a dual adjustable power supply for your circuits. Outputs positive-negative voltages from ±5 to ±15VDC.

- Adjustable positive and negative supplies ±5 to ±15VDC, 175mA – 750mA per supply • 120VAC input
- LED on indicator • PC board construction

Includes: Components and hardware

Part No.	Mfr. Cross Ref. No.	Dimensions	Wt. (lbs.)	1	10	25
20626CP	JE215	5.1"L x 3.5"W x 2.0"H	2.1 ..	$22.95	$20.49	$18.49

velleman DC to Pulse Width Modulator Kit ▲ *40-piece kit*

The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage.

- PWM range: 0 to 100%
- PWM frequency: 100Hz to 5kHz (adjustable)
- Operating voltage: 8 to 35VDC
- Min. consumption: 35mA • Max. output current: 6.5A
- Efficiency: better than 90% at full load
- Adjustable sensitivity: 2.5 to 35VDC

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
120539CP	K8004	3.3"L x 1.9"W x 1.8"H	0.5	$22.95	$20.49	$18.95

Opening an account is easy!!

Corporate Customers

Call 1-800-831-4242 for details today

DC Motor Speed Control Kit ◼ *35-piece kit*

- This kit uses Pulse Width Modulation to vary the speed of a DC motor and maintain torque
- For motors up to 100VDC/5A max.

Requires: 5-16VDC supply (recommend P/N 114825CP, pg 53)

Part No.	Description	Dimensions	1	10
127829CP	Motor control kit	3.6"L x 2.3"W x 1.2"H	$19.95	$17.95

Unipolar Stepper Motor Driver Kit ◼ *29-piece kit*

- Will drive unipolar stepper motors rated up to 6-30VDC @ 1.25A
- Drives 5, 6 or 8 lead unipolar stepper motors
- Onboard 5VDC regulator

Part No.	Description	Dimensions	1	10
139109CP	Stepper motor	2.6"L x 1.9"W x 1.0"H	$29.95	$26.95

DC Voltage Monitor Kit ⬤ *46-piece kit*

If battery status is important, you need this kit. It uses 7 LEDs to monitor 12VDC in 1V, 0.5V, or 0.25V steps. Monitor 8V or 5V in 0.25V steps. Great for boats, motor homes, model planes or race car Ni-Cads.

Part No.	Mfr. Cross Ref. No.	Dimensions	1	10
181833CP	VM-1	2.7"L x 1.3"W	$8.95	$7.95

Electronic Dice Kits

velleman Single and Dual Electronic Dice Kits

Board games provide an excellent source of entertainment. However, the dice can be a constant source of distraction: they fall off the table, allow cheating, results may not be seen properly and so on. There can be no doubt at all about the result displayed on this electronic dice module, and cheating is out of the question. Displays are switched off automatically after 30 seconds to save battery power. Rolls out slowly when releasing the push button.

200299CP: Single die
- 35-piece kit • Experience level: Beginner

200352CP: Dual dice
- Two fully independent dice, at your choice you can play with one or two dice.
- 85-piece kit • Experience level: Intermediate

200299CP

200352CP

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
200299CP	MK109	2.4"L x 1.7"W	0.2	$9.95	$8.95
200352CP	K3400	3.0"L x 2.8"W	0.5	18.95	16.95

For more IR-control receiver modules see page 207.

velleman Infrared and RF Code Lock Transmitters and Receivers ■ ▲

- Use for car alarms, garage doors, door locks, lighting control, etc.   • Over 8000 selectable codes
- Use several transmitters with one receiver
- Receivers feature relay output (10A change-over or pulse contact)

Requires: Transmitter:12V battery type V23G; receivers: 12-16VDC @ 100mA (recommend P/N 100095CP, pg 52)

117655CP

Specifications:

Transmitter	117647CP	117647CP	134543CP
Transmission	RF	RF	IR
Channels	2-ch	1-ch	1-ch
Range	100'	100'	23'
Experience	expert	expert	novice
Use w/ receiver	173235CP	117655CP	134551CP

134543CP

Part No.	Description	Kit Pieces	Wt. (lbs.)	1	10
117647CP	K6706 2-ch transmitter (RF)	29	0.3	$16.95	$14.95
173235CP	K6727 2-ch receiver (RF)	75	0.5	39.95	35.95
117655CP	K6707A 1-ch receiver (RF)	75	0.5	29.95	26.99
134543CP	K6708 1-ch transmitter (IR)	16	0.3	13.95	12.49
134551CP	K6709 1-ch receiver (IR)	66	0.5	28.95	26.95

15-Channel Infrared Transmitter & Receiver ■

- Applications: remote on-off switch, alarms, garage door opener, etc.
- 15 independent channels
- Transmitter/receiver range: ±30 meters

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120555CP: Transmitter

120555CP

Requires: 9VDC battery (recommend P/N 151095CP, pg 199)

120547CP: Receiver

- Each output can be a change-over or pulse contact switch
- Output: 50VAC @ 500mA max.
- PCB dimensions: 2.8"L x 5.7"W

120547CP

Requires: 8-14VDC (recommend P/N 100095CP, pg 52 or 129314CP, pg 53)

Part No.	Description	Kit Pieces	Wt. (lbs.)	1	10
120555CP	K6710 15-ch transmitter	37	0.8	$64.95	$58.39
120547CP	K6711 15-ch receiver	76	0.5	44.95	39.95

Computer Control Interface Kit ▲ *301-piece kit*

Connects to printer port without interruption of the printer. Works well in control applications such as the DC dimmer (P/N 128901CP, right) and infrared transit/receiver (P/Ns 120555CP and 120547CP, above).

- 16 I/Os with opto coupler
- Analog outputs: eight 6-bit (64 steps), one 8-bit (256 steps)
- Analog inputs: four 8-bit (256 steps)
- Full opto-isolation with computer
- 3.5" driver disk w/ routines in C++, QBASIC, Turbo Pascal

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Requires: DB25 cable (P/N 65787CP, pg 160)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
128928CP	K8000	9.3"L x 5.3"W	1.7	$139.95	$125.95

velleman Remote Control by Telephone ▲ *116-piece kit*

- Possible to turn on or off up to three devices (switching lights on-off; check alarm systems; water heater on-off; garage doors)
- Check conditions of a switch (open or closed)
- Protected by a user-defined code
- Pick up after 3 or 8 rings (selectable)

Requires: 12VAC @ 300mA (recommended P/N 101258CP, pg 51)

Includes: Relay for one output (10A/250VAC)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
120678CP	K6501	4.1"L x 5.1"W	0.7	$69.49	$62.59

Infrared Remote-Control Receiver Modules

139889CP   **131908CP**   **165008CP**   **176541CP**

- Commonly used in TVs, VCRs, audio equipment, car stereos and home computers that receive signals or data via infrared
- Single unit module which incorporates a PIN diode & a receiving preamplifier IC
- Excellent mechanical strength and electrical stability
- 940nm wavelength   • Size: 0.6"L x 0.6"W x 0.5"H

Part No.	Description	Voltage Input	1	10	100	1000
139889CP	37.9kHz, top view	5VDC @ 2mA	$2.99	$2.69	$2.39	$1.99
131908CP	38.0kHz, side view	5VDC @ 2mA	2.95	2.49	1.95	1.49
165008CP	40.0kHz, top view	5VDC @ 5mA	2.99	2.69	2.39	1.99
176541CP	56.8kHz, side view	5VDC @ 2mA	1.95	1.59	1.19	.85

Infrared Transmitter & Receiver Kit ○ *26-piece kit*

Transmit a 40kHz modulated I-R signal to a distance of 6' to 8'. Can be used as a remote switch to turn objects OFF and ON by infrared. The IR receiver will only receive 40kHz modulated infrared light. You can configure the output for normally ON or normally OFF operation. This allows you to use it as a security sensor or as a remote control switch. You can use the receiver to test TV or VCR remote controls.

- Transmitter size: 1.0"L x 0.8"W   • Receiver size: 1.4"L x 1.2"W

Requires: 6 to 15VDC battery (recommend P/N 151095CP, pg 199)

Part No.	Mfr. Cross Ref. No.	Description	1	10
177092CP	IR-2	Transmitter/receiver	$24.95	$22.49

IR LED Illuminator Kit ○ *41-piece kit*

- Improve low-light camcorder and CCD camera images without visible light
- 36 high powered infrared LEDs
- At 24' the beam is approximately 3.5' across

Ideal for CCD Cameras

Requires: 12-15VDC power supply (recommend P/N 114825CP, pg 53)

Part No.	Description	Dimensions	1	10	25
157964CP	IR illuminator kit	2" Dia.	$16.95	$15.29	$13.75

velleman DC Controlled Dimmer Kit ▲ *37-piece kit*

This circuit is ideal for replacing an existing dimmer switch; can be used in a control application via P/N 128928CP interface board, left.

- Supply voltage: 110VAC or 220-240VAC, 50 or 60Hz
- Can be used for 24VAC   • DC control voltage: 0-10VDC
- Maximum control current: 2.25mA @ 12V

Part No.	Prod. No.	Dimensions	1	10	25
128901CP	K8003	3.0"L x 2.0"W x 1.8"H	$22.95	$20.49	$18.59

Relay Controller Kit
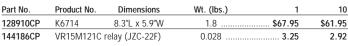
velleman Universal Relay Card Kit ▲ *64-piece kit*
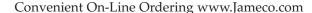
An electronic controller that switches higher currents while providing insulation between the controller and the controlled devices.

- Relay output: maximum 5A/220VAC
- TTL or 5V CMOS inputs
- Contact voltage: 12VDC/250mA

Requires: 220 or 125VAC power source

128910CP

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
128910CP	K6714	8.3"L x 5.9"W	1.8	$67.95	$61.95
144186CP	VR15M121C relay (JZC-22F)		0.028	3.25	2.92

Crossbow   Accelerometers and Interface

141591CP 1-Axis and 141575CP 3-Axis Accelerometers
- Dynamic range and excellent frequency response
- Acceleration range: ±4g
- Shielded cable: 2'L pigtail
- Size: 1.9"L x 1.0"W x 0.8"H

Requires: 5VDC power supply
(not included – recommend P/N 164101CP, pg 51)

141583CP: Digital Accelerometer Interface
- Measures acceleration, impact, tilt, vibration, etc.
- Simple digital interface for 1-axis and 3-axis
- Plugs into any RS-232 port @ 38.4k baud
- 200Hz max. sampling rate
- Size: 3.0"L x 2.5"W x 1.3"H

Requires: DB9 male to female cable (recommend P/N 25700CP, pg 160)
Includes: User friendly graphical software and 9VDC @ 500mA power supply

141591CP

141583CP

Part No.	Description	Axis	Current	1	10
141591CP	CXL04LP1	One	8mA	**$99.95**	**$89.95**
141575CP	CXL04LP3	Three	24mA	249.95	219.95
141583CP	Digital interface card			249.95	224.95

Crossbow   Accelerometer Evaluation Board

Single Axis
Evaluation board for ADXL105, single axis, 5g accelerometer.

Part No.	Product No.	Description	1	10
177295CP	ADXL105EB	Single axis	**$49.95**	**$44.95**

Accelerometer Evaluation Boards

Dual Axis
Evaluation board for the ADXL202, dual axis, 2g accelerometer.

Crossbow

177308CP: features RS-232 interface to connect to PC serial ports. Also includes software to display real time acceleration data.

177308CP

Part No.	Product No.	Description	1	10
177287CP	ADXL202EB	Dual axis	**$49.95**	**$44.95**
177308CP	ADXL202EB-232	w/ RS-232	119.95	107.95

PRECISION NAVIGATION, INC. Vector 2X Compass Module
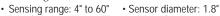
- 2˚ accuracy, 1˚ resolution
- 5Hz sampling rate
- 3-wire serial output format (compatible with Motorola SPI and National Microwire)
- Hard iron calibration
- Pin selectable BCD or binary output format
- Raw uncalibrated magnetometer output optional
- Master or slave capability for data clock generation

Requires: Power supply 5V @ 10mA (recommend P/N 112070CP, pg 51)

Part No.	Description	1	10	25
126703CP	Vector 2X module	**$49.95**	**$44.95**	**$39.95**

Senix   Distance Sensor Modules

Sends out a sound wave 20 times per second and calculates the distance based on the time differential between send and receive signals. The distance is represented by an output voltage from 0 to 10VDC (P/N 134105CP) or RS-232 signal (P/N 151482CP).

- Sensing range: 4" to 60"   • Sensor diameter: 1.8"
- Board size: 2.8"L x 1.8"W x 0.9"H   • One-year warranty

Requires: 15 to 24VDC @ 40mA (not included), recommend P/N 114825CP, pg 53
134105CP: • Output voltage: 0-10VDC
- Each 1VDC increment = 5.6" (e.g.: 1VDC output = 9.6")
151482CP: • RS-232 output
Includes: Disk and computer cable

134105CP

Part No.	Description	Wt. (lbs.)	1	10
134105CP	Sensor – voltage output	0.2	**$159.95**	**$143.95**
151482CP	Sensor – RS-232 output	1.0	179.95	161.95

velleman   Electronic Thermostat Kit ■ *29-piece kit*

General low-cost thermostat with NTC temperature sensor. Output relay with LED indicator
- Temperature range: 5˚C to 30˚C (41˚F to 86˚F)
- Relay power rating: 24VDC/VAC 3A
- Size: 2.1"L x 2.4"W x 1.1"H

Requires: 12VDC @ 100mA (recommend P/N 100095CP, pg 53)

Part No.	Description	1	10
211799CP	Electronic thermostat kit	**$10.95**	**$9.95**

velleman   Metal Detector ■ *22-piece kit*

- Proximity range adjustable to 8cm
- LED indicator; can use a buzzer as an option (P/N 105822CP, pg 129) • Dimensions: 2.1"L x 2.1"W

Requires: 9V battery (recommend P/N 151095CP, pg 200)
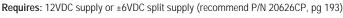
Part No.	Product No.	Description	1	10	25
129091CP	K7102	Metal Detector	**$12.99**	**$11.69**	**$10.59**

Function Generator Kit ■ *21-piece kit*

Sine, Triangle and Square Wave

Great for prototyping electronic circuits, whether analog or digital! Produces sinusoidal, triangular, and square waveforms at frequencies continuously variable from 1Hz to 100kHz.
- 21-piece kit (chip, components, PC board, hardware)

Requires: 12VDC supply or ±6VDC split supply (recommend P/N 20626CP, pg 193)

Part No.	Mfr. Cross Ref. No.	Dimensions	1	10	25
20685CP	JE2206	4.1"L x 1.5"W	**$24.95**	**$22.95**	**$19.95**

velleman   Signal Generator Kit ● *34-piece kit*

- Signal output: sine, triangle, square, and integrator wave (jumper selectable)
- Signal frequency: about 1KHz (fixed)
- Output level: adjustable from 0 to 100mVrms
- Size: 2.3"L x 1.7"W x 1.3"H

Part No.	Product No.	Description	1	10
200281CP	MK105	Signal Generator	**$12.99**	**$11.69**

velleman   Liquid Level Controller Kit ▲ *73-piece kit*

Controls the level of any container of liquid. Can replace the liquid sensors with temperature or light sensors for corresponding use.
- Alarm signal provided for desired applications

Requires: 12-14VAC @ 300mA minimum power supply (P/N 10081CP, pg 51)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
129154CP	K2639	4.1"L x 2.4"W x 1.0"H	0.5	**$24.95**	**$22.49**

velleman   Water Leak Alarm Kit ● *7-piece kit*

Alarms you of water overflows and leaks!
- Water sensor can be placed at a distance by cutting the board and using wires for connection
- Incorporated loud alarm buzzer

Requires: 9VDC battery (P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
157315CP	MK108	2.8"L x 1.8"W	0.1	**$10.95**	**$9.95**

Phone 1-800-831-4242

Online www.Jameco.com

Order Anytime 24x7x365

Fax 1-800-237-6948

Super Snooper Big Ear Audio Amplifier Kit
◼ *17-piece kit*

Listen through walls, hear conversations across the room or listen to sounds a block away. Add a parabolic reflector or mount the microphone in a tube, to isolate unwanted noise and make a directional microphone.
• Operating voltage: 9VDC (recommend P/N 151095CP, pg 200)

Includes: Instructions, outputs for speakers or headsets and schematic

Part No.	Description	Dimensions	1	10	100
151204CP	Audio Amplifier Kit	1.8"L x 1.0"W x 0.6"H	$10.95	$9.95	$8.95

FM Stereo Transmitter Mini Kit ◼ *37-piece kit*

Run your own FM radio station! Plug any stereo signal into this unit and it will be transmitted to any FM radio. Tuneable from 76–108MHz. Plug in a CD player or tape deck and you have a wireless link to an FM radio within 200 feet. Clarity is approximately 40dB stereo separation.

Requires: 9VDC power supply (recommend P/N 151095CP, pg 200)

Part No.	Description	Dimensions	1	10
151239CP	FMST-100 stereo kit	2.7"L x 2.0"W	$29.95	$26.95

velleman FM Transmitter ◼ *26-piece kit*

Mini FM transmitter (100-108MHz) ideal for family broadcasts, baby monitors and security. May be received by any portable FM radio or tuner.
• Integrated pre-amplifier (sensitivity 5mV)

Requires: 9-12VDC power supply (recommend P/N 20626CP, pg 193)

Part No.	Product No.	Dimensions	1	10	25
117604CP	K1771	1.8"L x 2.8"W	$12.49	$11.29	$10.19

velleman FM Radio Kit ◼ *65-piece kit*

Easy to assemble – no coils to wind. Receives the complete FM band of 88 – 108MHz.
• With on/off switch, volume control, and LED indicator
• Single adjustment

Includes: 12VDC @ 100mA power supply

Part No.	Product No.	Dimensions	1	10
211772CP	MK118	4.8"L x 3.3"W	$21.95	$19.95

One-Chip AM Radio Kit ◼ *39-piece kit*

• Uses an IC that performs as an RF amp, detector & AGC in an AM radio

Requires: 9V battery (recommend P/N 151095CP, pg 200)

Part No.	Description	Dimensions	1	10	25
125161CP	AM radio kit	4.0"L x 1.3"W x 0.5"H	$15.49	$13.95	$12.59

TV Notch Filters Mini Kit ◼ *33-piece kit*

Eliminates unwanted TV channels or interference that alters sound and video. Works on cable channels 2 to 22 and 97 to 99.

Part No.	Description	Dimensions	1	10
151167CP	DF-222 TV filter kit	3.2"L x 0.9"W	$15.95	$14.49

velleman 10 LED Mono VU Meter Kit ◼ *36-piece kit*

• Instant visualization of audio signal levels
• Easy hook up to a LINE level (LOW input) signal source
• Special input (HIGH input) is provided, which allows direct connection to a speaker output
• Frequency range: 20Hz to 30kHz
• Dot or bar display mode selectable

SALE

Requires: 15VDC @ 300mA max. power supply (P/N 189982CP, pg 54)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
147643CP	K4304	2.7"L x 1.4"H	0.3	$19.95	$17.95

velleman Universal Mono Pre-Amplifier ◼ *17-piece kit*

For audio applications with insufficient input signal.
• Output impedance: 1kΩ   • Max. input signal: 40mV
• Frequency range: 20Hz - 20kHz +/-3dB
• Adjustable output level: 40dB max.

Requires: 10/30VDC @ 10mA power supply (recommend P/N 20626CP, pg 193)

Part No.	Product No.	Dimensions	1	10	25
117612CP	K1803	1.2"L x 1.8"W	$8.95	$7.95	$7.25

1-Watt Amplifier Kit ◼ *9-piece kit*

Amplifies audio signals for an 8Ω speaker.
Use on P/N 125111CP and P/N 147838CP.
• Ideal part for larger projects & battery powered circuits
• Circuit designed around a single TDA7052 IC
• Battery and battery snap not included (recommend P/N 151095CP and 151095CP, pg 200)
• Drives 8Ω speaker (not included)

Part No.	Description	Dimensions	1	10	25
125111CP	1 watt amp kit	.3"L x 1.1"W x 0.9"H	$6.29	$5.59	$4.99

Super Mini 2.5W Audio Power Amplifier ◼ *27-piece kit*

This circuit has incredibly tiny dimensions. The IC has a pre-amplifier and power amplifier, which can be used separately by cutting a jumper.
• Operating frequency: 60Hz to 15kHz
• Max. output power: 2.5W (4Ω, 12V)
• Short circuit/thermal overload protection

Requires: 4.5-15VDC @ 400mA power supply (recommend P/N 114825CP, pg 53)

Part No.	Product No.	Dimensions	1	10	25
127175CP	K2637	1.7"L x 1.3"W x 1.1"H	$11.95	$10.69	$9.65

velleman 7-Watt Amplifier Kit ◼ *22-piece kit*

• Music output power: 7W/4Ω
• RMS output: 3.5W/4Ω & 2W/8Ω
• Harmonic distortion: 0.05% (1W/1kHz)
• Frequency response: 20 to 20kHz (-3dB)
• Short circuit/overload protection

Requires: 15VDC (8-18VDC) @ 500mA power supply (recommend P/N 155803CP, pg 54); speakers

Part No.	Product No.	Dimensions	1	10	25
127255CP	K4001	2.2"L x 1.4"W	$13.95	$12.49	$10.95

18-Watt Bridged Mono Amplifier Kit
🟡 *17-piece kit*

• Drives 3-8 ohm speakers
• Based on the Hitachi HA13118 amplifier IC

Requires: 12VDC supply (recommend P/N 100095CP, pg 53)

Part No.	Description	1	10
136207CP	18 watt amplifier kit	$15.59	$13.95

CEBEK 20-Watt RMS Amplifier Module
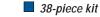
• Input signal: 250mV   • Maximum current: 2A
• Output impedance: 4-8Ω (mono)
• Terminals: .100" matching disconnect solderless terminals
• Size: 2.8"L x 2.8"W x 1.6"H

Requires: Power supply: 12V @ 2A (recommend P/N 143714CP, pg 49)

Part No.	Description	1	10
147838CP	E-11 mono amplifier	$24.95	$22.49

velleman 30-Watt Stereo Power Amplifier
◼ *38-piece kit*

General purpose stereo amp for audio applications.
• RMS output: dual 15W @ 4Ω or dual 10W @ 8Ω
• Frequency bandwidth: 7Hz to 60kHz (-3dB) • Separation: 70dB
• Supply voltage: 24VCT @ 2A (recommend P/N 101864CP, pg 45)

Part No.	Product No.	Dimensions	1	10	25
129138CP	K4003	2.8"L x 2.0"W	$29.95	$26.95	$24.49

Sound Generator Kit ■ *61-piece kit*

- Produces 10 different sounds w/ adjustable speed: guns, sirens, car engines, explosions, tunes, screeching tires, phaser guns
- Push-button keyboard

Requires: 8Ω/1 watt speaker (recommend P/N 102031CP, pg 98); 9V battery (recommend P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	1	10
127562CP	K4401	2.8"L x 2.8"W	$29.95	$26.95

Metronome Kit ● *27-piece kit*

SALE

- Adjustable volume and beats/minute
- LED beat indication
- Incorporated speaker
- On/off switch on board

Requires: 9VDC battery (P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
157331CP	MK106	2.4"L x 1.6"W	0.1	$13.99	$12.79

Light Sensitive Electronic Cricket Kit ■ *26-piece kit*

Sounds like a cricket when it gets dark!

- Adjustable cricket effect, tone and light sensitivity
- Minimum consumption: 9V/5mA

Requires: 8-15VDC power supply (P/N 100095CP, pg 53) or 9VDC battery (P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
147547CP	MK104	2.5"L x 1.7"W x 1.6"H	0.1	$14.95	$13.49	$11.95

Siren Kit ● *20-piece kit*

- Oscillator is off until you press the switch, then a rising tone is produced until a steady value is reached
- If switch is released, tone starts dropping until it cuts off
- Circuit designed around a dual op amp connected as an oscillator and driver

Requires: 9V battery (recommend P/N 151095CP, pg 200)

Part No.	Description	Dimensions	1	10	50	100
125137CP	9V siren	2.0"L x 0.8"W x 0.5"H	$6.95	$6.25	$5.59	$4.95

Train Sound Generator Kit ● *11-piece kit*

- Produces 4 train sounds by switch selection
- Components supplied for operation on 3VDC (includes battery holder for 2 AA batteries), but circuit will operate from 2.4-6VDC (recommend P/N 151087CP 2 each, pg 200)

Part No.	Description	Dimensions	1	10	25
125170CP	4 train noises	1.1"L x 0.6"W x 0.2"H	$9.49	$8.59	$7.69

Karaoke Kit ■ *59-piece kit*

You can do your "Elvis" impersonation by hooking-up this kit between your CD player, MD player, or any other line-level source and your amplifier and sing along to your favorite Elvis' music. Adjustable microphone level and "vocal reduction" switch reduces original vocals on most stereo surroundings.

- RCA input and output sockets • ON/OFF switch and led power indicator
- 6.3mm microphone jack that fits most microphones
- Low power consumption: 16mA typical

Requires: 9V battery (recommend P/N 198731CP, pg 200)

Part No.	Product No.	Description	Wt. (lbs.)	1	10
215394CP	MK140	3.9"L x 3.3"W x 1.0"H	0.2	$15.95	$14.35

Speech Recording & Recognition Kits

SENSORY Interactive Speech Recognition Kit ■

Voice Direct 364 is a speaker dependent speech recognition module, allowing training of up to 60 words or phrases in slave mode, or 15 words or phrases in stand alone. This kit maps spoken commands to system control functions. Each time one of the words is recognized, output pins on the module are toggled high for 1 second.

Includes: Voice Direct 364 module, Quick setup guide, Microphone element, Speaker (2.25" Dia., 8Ω), 4 microswitches, and a passive component selection to configure the module

Part No.	Description	1	10
173489CP	Speech recognition kit	$59.95	$53.95

Digital Voice Module

SALE

- Selectable 16k/32k/44k bps sampling rate
- 0.5W audio amp on board with volume control
- All components soldered on board
- Plays 16 messages • 1M DRAM on board
- Power requirements: 6-12VDC, 200mA (P/N 100095CP, pg 53)

Part No.	Mfr. Cross Ref. No.	1	10	25
124871CP	DVM58D	$74.95	$67.49	$60.75

Speech Recognition Kit ▲ *42-piece kit*

A complete easy to build programmable recognition kit, program the words you want the circuit to recognize. The heart of this speech recognition kit is the HM2007 IC wherein you can program 40 words @ 0.96 second word length or 20 words @ 1.92 seconds word length. Several applications for this kit are: speech controlled appliances and toys, speech assisted computer games, telephone assistance systems, voice recognition security, and speech-to-speech translation.

- User programmable • Non-volatile memory back-up
- Easily interfaced to control external circuits and appliances • Multi-lingual

Part No.	Mfr. Cross Ref. No.	Description	Wt. (lbs.)	1	10
208611CP	HM2007U1	Speech kit	0.7	$119.95	$107.95

Voice Activated LEDs Kit ■ *33-piece kit*

Uses sound to activate the flashing of 4 bright red LEDs.

- Power consumption: 0.5mA min./12mA max.
- Adjustable sensitivity

Requires: 8-15VDC power supply (P/N 100095CP, pg 53) or 9VDC battery (P/N 151095CP, pg 200)

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10	25
147571CP	MK103	2.5"L x 1.6"W x 1.4"H	0.1	$9.95	$8.95	$7.49

Electronic Locks

Electronic Combination Lock ■ *19-piece kit*

- Programmable 4-digit combination lock with separate 9 touch-pad board
- Output: 240VAC 12A relay controls external loads

Requires: 9V battery (P/N 151095CP, pg 200)

Part No.	Description	Dimensions	1	10
125129CP	Lock kit	3.0"L x 2.5"W x 1.0"H	$12.29	$10.99

Code Lock Kit ■ *67-piece kit*

- Switch an alarm on and off or open door locks
- 3000+ codes possible • LED indicates state
- Pulse or switch outputs • Relay contact rating: 5A/220V

Requires: 9-15VDC (P/N 163491CP, pg 53) or 8-12VAC (P/N 100061CP, pg 51) power supply

Part No.	Product No.	Dimensions	Wt. (lbs.)	1	10
127554CP	K6400	1.7"L x 1.8"W	0.5	$25.95	$23.95

650nm Line and Dot Laser Diodes

167214CP/143845CP/173243CP:
- Focus adjustable w/ locking set screw
- Wattage: 5mW
- Operating voltage: 3-5V
- Size: 3.3"L x 0.9"Dia.
- One-year warranty

Class IIIa Laser Product

173243CP

143845CP: Line laser module
- Laser line width: 1mm • Laser fan angle: 60˚

173243CP: Cross hair laser diode module
- Laser fan angle: 60˚
- Female 2.1mm power connector
- Size: 3.0"L x 0.9"D

143837CP: Module regulated power supply
- Output: 5VDC @ 100mA
- Short circuit protection
- Input voltage: 95-125VAC or 190-250VAC switchable
- Size: 2.0"W x 1.7"D x 9.2"H
- Weight: 0.6 lbs.

Laser Diode

143853CP

143853: Laser module mount
- Built to hold laser diode on target.
- X-Y tilt, θ movement
- Tightening screw for tilt adjustment

Part No.	Description	1	10
143845CP	Line laser diode module	$114.95	$103.95
143853CP	Laser diode module mount	49.95	39.95
173243CP	Cross hair laser diode mod.	89.95	80.95
143837CP	Regulated power supply	19.95	17.95

Laser Diode Levels

- Line and dot laser models
- Skew is determined by built-in bubble
- Two magnets at the bottom of the unit for metal to magnet mounting
- Laser wavelength: 650nm
- Threaded mounting hole at the bottom of unit for tripod mounting
- Size: 5.4"L x 0.8"W x 1.4"H

169762CP

169771CP

SALE

Includes: Manual, 2 AAA batteries and plastic casing

Part No.	Mfr. Cross Ref.	Laser Type	1	10
169762CP	TI3284E	Line	$54.95	$49.49
169771CP	TI3284D	Dot	35.79	32.25

Laser Alignment Tool Kit

The industrial grade laser diode alignment system produces a collimated beam from a 650nm index guided laser. It is an ideal tool for a wide range of low power laser applications such as positioning, alignment, robotic control, and measurement. The system is fully self-contained with power supply, laser diode, and optics. Focal length is fully adjustable.

- Case size: 9.0"L x 7.0"W x 2.0"H
- Weight: 1.3 lbs.

Includes: Pushbutton switch, pressure pad switch, 3V lithium battery, universal mount, magnet mount, interchangeable lens cap (cross hair, dot, line) and hard carrying case.

Part No.	Description	1	10
215167CP	Laser alignment kit	$149.95	$139.95

Glass-Lens Red Laser Diode and Line Generator

133292CP: Laser Diode

Class IIIa Laser Product

This lens design uses 3-element glass to collect almost all the power from the laser diode resulting in a brighter spot than many typical laser applications.

- Operating voltage: 4.0–6.0VDC (recommend P/N 112070CP, pg 51)
- Maximum output: 4mW
- Beam size at 7m: oval – 5mm x 8mm
- Wavelength: 660nm
- Beam divergence: 0.2mrad
- Green LED indicator • Module size: 2.0"L x 0.5"W

133292CP

134148CP

134148CP: 60° Line Generating Lens
- Adjustable focus range: 50 cm to ∞
- Back focal length: 1.5mm • Focal length: 8.0mm
- Beam divergence: 2.0mrad
- Lens construction: 3E.3G (glass)
- Fan angle: 60° • Length at 1 meter distance: 1.7 m

Part No.	Description	1	10	25
133292CP	Glass laser diode	$44.95	$39.95	$35.95
134148CP	60° lens	12.95	11.49	9.95

Laser Diode Module

- Operates on 3VDC @ <5mW
- 670nm wavelength
- Beam diameter: 3.2mm
- Working distance: over 50 meters/yards (daylight), 200 meters/yards (dark)
- Size: 0.9"L x 0.3"Dia. • One-year warranty

Class IIIa Laser Product

Part No.	Description	1	10	25
131203CP	Laser module, brass...	$44.95	$40.49	$36.45

Laser Diode and Driver

182932CP: Laser Diode

Class IIIa Laser Product

- Optical output power: ≤5mW maximum
- Operating current: 30mA
- Operating voltage: 2.6V maximum
- Lasting wavelength: 650nm typical
- 5.6mm packaging size
- Beam divergence of 11 degrees from center line maximum

182932CP

SALE

161736CP

161736CP: Laser driver w/ regulator
- Input voltage: 2.6-6VDC • Input current: 40mA
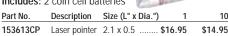
Part No.	Description	1	10	25
182932CP	650nm laser diode ...	$11.95	$10.79	$9.69
161736CP	Laser driver	7.95	6.95	6.25

ALPEC Laser Pointer w/ Key Ring

- Range up to 150 yards
- 650nm red laser
- One-year warranty

Class IIIa Laser Product

Includes: 2 coin cell batteries

Part No.	Description	Size (L" x Dia.")	1	10
153613CP	Laser pointer	2.1 x 0.5	$16.95	$14.95

ALPEC Laser Pointer Pens

153605CP

127749CP

- Range up to 500 yards • 670nm red laser

Includes: 2 AAA batteries

Class IIIa Laser Products

Part No.	Description	Size (L" x Dia")	1	10
153605CP	Black pen	5.2 x 0.4	$19.95	$17.95
127749CP	Silver brass	5.4 x 0.4	21.95	19.95

9.8' Optical Voice Link Kit

This kit is the ideal introduction to the science of light transmission through 9.8' optical fiber.

- Weight: 0.6 lbs.

Requires: 9V battery, recommend (P/N 151095CP, pg 200)

Part No.	Description	1	10
169922CP	9.8' Optical Voice Link Kit	$49.95	$44.95

Educational Communication Kit

Explore fiber optic technology using this great hands-on educational product. This 3' digital link can also be used to construct high-voltage isolation for telephones, modems and computers.

Includes: 3' Optical Fiber Cable

Part No.	Description	1	10
169906CP	Ed. Communication Kit	$19.95	$17.95

Fiber Optic Designer's Kit

Simplex Kit

This "active link" interfaces with all TTL/CMOS logic and requires a single +5 volt power supply (recommend P/N 164101CP, pg 51). It includes 32' (10m) of 1000µm diameter plastic optical cable; 4 efficient dry, non-polish connectors, 2 bulkhead interfaces, 2 splices; 1 integrated detector and 1 emitter; and 2 top-quality printed wiring boards. Full instructions and technical data sheets complete the package.

Part No.	Description	1	10
169893CP	Fiber Optic Kit	$79.95	$71.95

Lab Course and Lab Kit

Experiment guide contains nine fiber optic experiments. Kit contains all the fiber optic and electronic components needed to complete the experiments.

Experiments Include:
- Making a light guide • Fiber optic transmitter
- Fiber optic cable transmission
- Characteristics of connectors and splices
- Index-matching procedures • Receiver design
- Speed of opto-electronic devices
- Fiber termination techniques • Weight: 0.7 lbs.

Part No.	Description	1	10
169914CP	Lab Course and Lab Kit	$46.89	$42.29

Fiber Optic Cable-Cutting Tool Kit

Kit contains fiber optic stripper, 25W hot knife professional fiber cutter, water dispenser, rubber pad, 600 grit and 3µm polishing film, replacement blades, ST-connector fiber polishing puck, rugged storage container and instruction booklet. • Weight: 2.5 lbs.

Part No.	Description	1	10
170034CP	Fiber Optic Tool Kit	$114.95	$104.95

Solar Photon Racer Kit

Build your own solar racer and tap into the power of the sun! This easy-to-assemble kit comes with everything you need, including a high-powered 1V, 500ma, ultra lightweight encapsulated solar cell and high-amp/low-voltage motor for maximum torque and speedy acceleration. Sleek transparent plastic body, made from recycled pop bottles, looks great as is, or add your own custom paint job. The Photon can travel 10 feet in three seconds on a smooth, flat surface, when exposed to full sun.

214738CP

• Difficulty level: beginner
• Size: 8.5"L x 3.8"W x 2.0"H

Part No.	Description	1	10
214738CP	Photon-P (painted)	$29.89	$26.99
215183CP	Photon-1 (non-painted)	24.89	21.79

Solar Energy Project Kit

Learn about the renewable energy available with solar power. Experimenter kit demonstrates the power of the solar cell to run an electric motor. Contains motor connected to solar cell, propeller, optical illusion spirals, and informative booklet.

• Difficulty level: beginner

Part No.	Description	1	10
215204CP	Solar energy project kit	$11.89	$10.79

Photovoltaic Sun Tracker Solar Kit

This kit gives students and hobbyists a realistic taste of practical applications for solar power. Contains motor, gear train, solar cell, tracker device, and instruction booklet. Booklet explains how to make sundials and three other unusual solar projects.

Part No.	Description	1	10
215191CP	Sun tracker solar kit	$29.89	$26.99

Solar Motor

• Operates on 0.5-3.0V @ 200mA start-up
• Runs at 80mA no load
• Low stall torque: 25-48 g-cm
• High RPM: 2500-5000 @ maximum efficiency
• Shaft diameter: 2mm
• Motor size: 1.0"Dia. x 1.5"L

Part No.	Description	1	10
215263CP	Solar motor	$2.89	$2.69

Motor and Gear Case

Combination motor and gear train in plastic case.

• Operates on 0.5-3.0V @ 0.5V
• Runs at 20mA
• Strong torque @3V: 41 g-cm
• 6 RPM
• Shaft diameter: 2mm
• Size 3.0"L x 2.0"W x 1.5"D

Part No.	Description	1	10
215271CP	Motor and gear case	$17.39	$15.75

Solar Clip-On Motion Retail Display

Just clip on to fluorescent lights and when the light turns on, so does your display. Long life solar motors rotate your display, turning signs counter clockwise. Best for point of purchase in-store advertising.

Part No.	Description	1	10
215221CP	Clip-on motion retail display	$24.89	$22.49

Solar Pocket Charger

Charge your batteries with free solar power. Inexpensive, easy and safe to use – completely self-contained unit, no moving parts or cords. Uses satellite type solar cells that produce the highest power to weight ratio. Compact and lightweight, you can carry this charger with you anywhere. Re-energizes carbon-zinc, alkaline, nickel-cadmium (NiCad), and nickel-metal-hydride (NiMH) batteries.

• Size: 3.6"L x 3.1"W x 1.5"D

Includes: Battery adapter to charge, AA, C, and D type batteries.

Part No.	Description	1	10
215239CP	Solar pocket charger	$32.89	$29.69

Solar Button Cell Battery Charger

A convenient and safe way to revitalize worn down button cell batteries used in hearing aids, cameras, calculators, remote controls, clocks, alarms and more. LED indicator lets you know when the battery is being charged. Charges nickel-cadmium (NiCad), nickel-metal-hydride (NiMH), alkaline, mercury, and most zinc air (1.2V-1.5V) batteries.
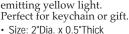
• Size: 2.3"L x 1.4"W

Part No.	Description	1	10
215247CP	Solar button cell charger	$16.89	$15.29

Forever Keychain Light

Miniature rechargeable light lasts for years and you'll never need to change a battery or bulb. Energized by solar cells, it is entirely self-contained. A squeeze turns on the LED emitting yellow light. Perfect for keychain or gift.

• Size: 2"Dia. x 0.5"Thick

Part No.	Description	1	10
215212CP	Forever keychain light	$19.89	$17.99

Clear Case with Gears

Motor case & gears Build a 2-speed motor with the parts in this kit. Works with our solar motor (P/N 215263CP, left column).

Includes: Clear SM-15 plastic case

Part No.	Description	1	10
215280CP	Motor case with gears	$6.89	$6.29

Mini-Panel Solar Cells

Ready to Use! No Soldering.

Encapsulated mini-panels utilize solar cells similar to those that power our satellites in space, yet they are safe and simple to use. Mini-panels allow for handling without the normal breakage and cell damage associated with fragile solar cells. 6" red/black lead wires attached. Modules may be connected to create different outputs.

200221CP

• Size: 3.8"L x 2.5"W • Connection: lead

Part No.	Prod. No.	VDC @ mA	Size (L x W)	1	10
200205CP	SOL2	0.5 @ 800	2.6" x 3.7"	$8.99	$7.99
200221CP	SOL4	2.0 @ 200	3.0" x 3.7"	8.99	7.99
215301CP	4-1.5-200	1.5 @ 200	3.8" x 2.5"	12.79	11.59
215319CP	4-3.0-100	3.0 @ 100	3.8" x 2.5"	14.29	12.89
215327CP	4-6.0-50	6.0 @ 50	3.8" x 2.5"	15.79	14.39

Solar Cell Assortment

Approximately 40 pieces of assorted cells at 0.5VDC. Various sizes and current ratings. Connect in series to increase voltage or connect in parallel to increase current.

Part No.	Description	1	10
215255CP	Solar cell assortment	$9.89	$8.99

Photovoltaic Solar Panel

• Output connection: conductive film requiring pressure contact or use of 3M conductive epoxy
• Rated 9.5VDC open circuit; 9VDC @ 0.06A in direct sunlight
• Size: 6"L x 6"W x 0.1"Thick

Part No.	Description	1	10	50
141751CP	0.5W solar panel	$7.95	$7.19	$6.45

Miniature Glass Solar Panel

• Open circuit voltage: 16.5VDC in full sunlight
• Operating temperature range: -5˚ to +40˚C
• Operating voltage: 12VDC @ 3mA
• Size: 3.6"L x 1.0"W
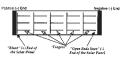
Part No.	Description	1	10	50
171985CP	Glass solar panel	$7.89	$7.19	$6.39

IOWA THIN FILM TECHNOLOGIES

Flexible Thin-Film Solar Panel

• For recharging NiCad, Nickel Metal Hydride and Gel-cell batteries
• Size: 4.5"L x 1.5"W

Positive (+) End   Negative (-) End

"Blunt" (+) End of the Solar Panel   "Fingers"   "Open Ends lines" (-) End of the Solar Panel

Part No.	Output	1	10	100
171061CP	3VDC @ 40-50mA	$9.19	$8.29	$7.49

Gears and Shafts Kit

Bag of gears, shafts and accessories. Great for science projects. All parts fit 2mm shaft motors.
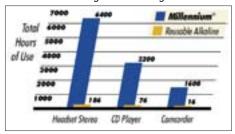
Part No.	Description	1	10
215298CP	Gears and shafts kit	$5.89	$5.29

Call for additional OEM PRICING – we carry major manufacturers.

Long-Lasting NiMH Batteries and Chargers

MILLENNIUM

185252CP   185308CP   **Free Batteries**   185295CP

Lasts 10-30 times longer than Rechargeable Alkaline!

Total Hours of Use — Millennium / Reusable Alkaline
Headset Stereo / CD Player / Camcorder

Why buy & throw away hundreds of batteries? Now you can reuse longer-lasting, money saving NiMH rechargeable batteries instead! They feature twice the power of NiCad batteries, so they're ideal for power-hungry devices like digital cameras & camcorders. The chargers below are specifically designed for NiMH batteries.

NiMH Batteries

Part No.	Description	1	10	25	100
185279CP	2x AAA, 700mAh	$7.95	$7.19	$6.49	$5.95
185261CP	4x AA, 1600mAh ...	13.95	12.49	11.25	9.95
197000CP	2x C, 2300mAh	9.95	8.95	8.15	7.29
196998CP	2x D, 2300mAh	9.95	7.99	6.99	5.99
197018CP	1x "9V", 150mAh	9.95	8.95	8.15	7.29

NiMH Chargers

185308CP: AA charger with 4 AA batteries   **Free Batteries**
185295CP: AAA, AA, C, D and "9V" charger
(Batteries not included)

Part No.	Description	1	10	25	100
185308CP	AA charger	$21.95	$19.95	$17.95	$15.95
185295CP	Universal chrgr	21.95	19.95	17.95	15.95

Eveready® Energizer® Alkaline Batteries

198707CP   198715CP
198723CP   198731CP
Energizer®

Energizer® and the Energizer Bunny® are registered trademarks of the Eveready Battery Company, Inc.

- Single use Energizer® alkaline batteries for heavy drain and frequent use applications
- Prepackaged: order in increments of 4

Part No.	Description	4	8	12
198707CP	AA	$.82	$.74	$.68
198715CP	AAA	.82	.74	.68
198723CP	C	1.39	1.25	1.20

Part No.	Description	1	4
198731CP	"9-volt type"	$2.59	$2.22
215845CP	D	1.95	1.69

4 AA Battery Holder

- Solder tabs
- 6" wire lead with connector
- Size: 2.3"L x 2.5"W x 0.64"H

Part No.	Description	1	10	100	1000
105857CP	Plastic battery holder	$.89	$.75	$.68	$.59

Lithium, Silver Oxide, Zinc Chloride and Alkaline Batteries

Applications: personal computers, workstations, test equipment, feature telephones, copiers, fax machines, video scramblers / descramblers and remotes.

146114CP   198791CP   150965   11789CP   140783CP   38543CP   33371CP   33443CP   33398CP

Part Number	Mfr. Cross Ref. No.	Description (V/Amp-hours/Dia.)	Battery Type	Terminals/Connection	1	10	25	100
151087CP	AA	1.5V/0.7A-h/.545"	Zinc chloride	Barrel pressure fit (standard AA)	$.25	$.23	$.21	$.19
151095CP	GF6F22	9.0V/0.3A-h/1.0"L	Zinc chloride	Standard 9V	1.25	.99	.79	.65
140783CP	357	1.55V/1.60A-h/.454"	Silver oxide	Button cell	1.75	1.49	1.25	1.09
198740CP	377	1.5V/20mAh	Silver oxide	Button cell	.59	.55	.50	.46
150965CP	840	4.5V/600mA-h	Alkaline	Battery pack w/ connector (Apple®)	9.95	8.99	8.09	7.25
198791CP	MN1604	9.0V/.5A-h	Alkaline	"9-volt"	2.59	2.35	2.15	1.85
198758CP	CR2016	3V/80mAh	Lithium	Coin cell	.89	.84	.79	.72
14162CP	CR2032	3V/180mA-h/.787"	Lithium	Coin cell (clock/memory)	1.25	1.00	.75	.53
11789CP	CR2325	3V/165mA-h/.906"	Lithium	Coin cell (clock/memory)	1.95	1.75	1.49	1.25
33371CP	TL5101P	3.6V/.85A-h/.579"	Lithium	Barrel w/ leads (clock/memory)	5.79	5.27	4.45	4.15
126754CP	TL5101S	3.6V/.85A-h/.579"	Lithium	Half AA (Macintosh®)	6.95	6.29	5.65	5.09
33398CP	TL5104P	3.6V/1.9A-h/.579"	Lithium	Barrel w/ lead (clock/memory)	5.95	5.49	5.19	4.85
146114CP	TL2100S	3.6V/1.9A-h/.579"	Lithium	Barrel pressure fit (clock/memory)	6.95	5.59	4.19	3.15
33427CP	TL5242W	3.6V/1.9A-h	Lithium	Battery pack w/ plug (PC)	9.95	8.95	7.15	5.39
33443CP	TL5293W	6.0V/1.9A-h	Lithium	Battery pack w/ plug (PC)	9.95	7.99	7.29	6.59

Coin Cell Battery Holders   SALE

Part No.	Mfr. Cross Ref. No.	Description	1	10	100	500
38535CP	2S2032	Battery holder for CR2032 (PC mount)	$.59	$.49	$.35	$.25
38543CP	2S2325	Battery holder for two BR2325 or one 2354 (PC mount)	.89	.71	.53	.37
196744CP	2032SM	Battery holder for CR2032 (SMT)	.25	.22	.20	.18

"9-Volt" Battery Snaps and Clip

- Use with standard "9 volt" batteries
- Fully insulated; contacts are nickel-plated brass
- Female inner Dia. = 0.215"
- Leads are color-coded, stripped and pre-tinned
- Snap: male outer diameter = 0.225"
- ✳ 10 Piece minimum

Fig. 1   Fig. 2   Fig. 3

Part Number	Fig.	Description	L	W	H	1	10	100	1000
11279CP	1	3", 26 AWG, 6 prong battery snap	1.0	.50	–	$.25	$.22	$.19	$.16
105793CP	2	Battery holder clip	.63	.71	1.2	.28	.23	.16	.14
109153CP	3	6", 26 AWG, 6 prong battery snap	1.0	.50	–	✳	.17	.15	.135
101469CP	3	10", 26 AWG, 6 prong battery snap	1.0	.50	–	.29	.25	.21	.14

Ni-Cad Batteries

Nickel-Cadmium batteries are rechargeable, sealed cells.

- Can be used for cyclic, trickle or float charge

126720CP   119116CP   101653CP

Part No.	Mfr. Cross Ref. No.*	Description	Voltage	Amps	1	10	25	100
32627CP	S3300	AA	1.2V	650mA-h	$1.95	$1.75	$1.49	$1.25
126720CP	351FT	2-lead (pin)	3.6V	60mA-h	4.49	4.05	3.65	3.29
119116CP	3/V60R	3-lead (pin)	3.6V	60mA-h	3.75	3.39	3.05	2.75
101653CP	NA101-1	2-lead (eyelet)	3.6V	60mA-h	5.49	4.95	3.95	3.25

* Reference number may vary

⚡ TEMPEST Lead Acid Batteries

- .187" color-coded terminals (except P/N 159679CP – .470")
- Sealed
- UL approved
- Rechargeable
- Two-year warranty

Tempest is an ISO-9001 Certified Company

155328CP   155336CP   159679CP

Part Number	Product Number	Nom. Volt.	Amp-Hrs.	Charging Voltage Standby	Cyclic	Panasonic	YUASA	Eagle Picher	Size L" x W" x H"	Wt. (lbs.)	1	10
155328CP	TR4-6	6	4A-h	6.75-6.9	7.2-7.5	LCR6VP	NP4-6	CF16V4	2.8 x 1.9 x 4.0	1.8	$10.49	$9.25
175054CP	TR10-6	6	10A-h	6.75-6.9	7.2-7.5	LCR6V10P	NP10-6	CFM6V10	5.9 x 2.0 x 3.8	4.3	14.95	13.45
159661CP	TR2.3-12	12	2.3A-h	13.5-13.8	14.4-15	LCR12V2.2P	NP2.3-12	CF12V1.5	7.0 x 1.3 x 2.3	1.9	14.95	13.49
155336CP	TR4-12	12	4A-h	13.5-13.8	14.4-15	LCR12V4PF	NP412	CF12V4	3.6 x 2.8 x 4.0	3.4	17.95	16.19
155344CP	TR7-12	12	7A-h	13.5-13.8	14.4-15	LCR12V7.2BP	NP712	CFM12V65	6.0 x 2.6 x 4.0	5.9	17.95	15.95
168188CP	TR12-12	12	12A-h	13.5-13.8	14.4-15	PS12120	—	CFM12V12	5.9 x 3.8 x 3.8	9.0	30.95	26.95
159679CP	TR18-12*	12	18A-h	13.5-13.8	14.4-15	LCR12V17BP	NPG18-12	CF12V18	7.1 x 3.0 x 6.6	13.8	34.95	29.95

*159679CP: Bolt terminals w/ bolt & nut set

PAYMENT OPTIONS

Credit Card/Check Cards
We accept VISA, MasterCard, American Express and Discover. No surcharge. Your account will not be charged until your order is shipped. When ordering, please advise name on card and credit card billing address.

Check or Money Order
You may pay by check or money order in U.S. funds, drawn on a U.S. bank.

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It is easy to open an account with Jameco. Contact us for obtaining open account status.

C.O.D.
Personal checks are accepted. Please add $7.00 per C.O.D. order. Include the name and address of your bank and your account number.

International Orders
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30-Day Money Back Guarantee
If for any reason you are not completely satisfied with your purchase, simply return the product, in its original packaging, within 30 days for a refund, credit or exchange. Parts returned due to customer ordering error may be subject to a restock fee. Call our customer service department at 1-800-536-4316 or visit www.Jameco.com to request an RMA#. It should appear clearly on the outside of the box. Returns without an RMA# will not be accepted, and no freight collect packages will be accepted. A completed Jameco customer service form, located on the back of the packing slip, must be included with your return. Books, kits, software, grab bags and special orders are not returnable. Special orders consist of products sold at an OEM quantity discount or products not listed in the Jameco catalog.

Jameco Warranty
Jameco warrants all merchandise against defects in material or workmanship for a period of 90 days from the original purchase date unless otherwise stated in writing by Jameco. If Jameco receives the product considered to be defective within this warranty period and the product is determined to be defective, Jameco will, at its sole option and discretion, either repair or replace the product. The foregoing is your sole and exclusive remedy and states Jameco's entire liability arising out of this warranty. [However, Jameco will transfer to customer whatever transferable warranties and indemnities Jameco receives from the manufacturer of the products. Any claims arising from such manufacturer's warranties shall be the sole responsibility of the manufacturer and not of Jameco.] Moreover, Jameco's limited warranty is void if the damage or defect has resulted from improper customer assembly, failure by customer to follow instruction, product modification, negligent or improper operation, accident, abuse or misapplication. Products returned to Jameco pursuant to this warranty must be returned to Jameco prepaid.

No Other Warranties
The limited warranty above is exclusive and in lieu of all other conditions and warranties for the products and documentation. Jameco makes no other conditions or warranties, express, implied, statutory or otherwise, and expressly disclaims all other conditions and warranties, including but not limited to, implied conditions or warranties of merchantability, fitness for a particular purpose, and non-infringement of the products.

Limitation of Liability
Jameco shall not be liable for any incidental, special or consequential damages for breach of any warranty, expressed or implied, directly or indirectly arising out of Jameco's sale of merchandise, including any failure to deliver any merchandise, or arising out of customer's installation or use, whether proper or improper, of the product, separately or in combination with other equipment, or from any other cause. Products sold by Jameco are not authorized for use as critical components in life support devices or systems.

5 EASY WAYS TO ORDER

Telephone: Toll-Free 24 hours a day! 1·800·831·4242 International orders, call 1·650·592·8097

Toll-Free FAX:
US/Canada: 1·800·237·6948
Brazil: 000·817·455·6119
Columbia: 980·9·136748
Indonesia: 1·803·015·237·6948
Mexico: 001·800·593·1449
New Zealand: 080·044·0470
Other Countries: 1·650·592·2503

Online: http://www.Jameco.com
On-line catalog! Our complete offering of over 6,000 products searchable on the Jameco website!

Mail: E-mail your order to: sales@Jameco.com or fill out the order form (page 202) and mail it to us.

In-Person: Visit Jameco at 1355 Shoreway Rd., Belmont, CA. Will-call office hours are 8:00 a.m. - 5:00 p.m. Monday - Friday

24-hour Ordering Hotline!

CONTACT INFORMATION

The following services are available at 1·650·592·8097 Monday - Friday from 6:30 a.m. - 5.00 p.m. PST or via e-mail:
• International Sales (international@Jameco.com)
• Customer Service (custservice@Jameco.com)
• Credit Department (credit@Jameco.com)
• Technical Support (tech@Jameco.com)

Toll-Free Hotline!
Please call us at 1-800-831-4242.

A Nuestros Clientes en
La Republica Mexicana: Si usted requiere tratar en Espanol y adquirir nuestros productos facturados L.A.B. Cd. De Mexico (libres de Aduana) y enviados al interior del pais via Estafeta, contacte con nuestro Representante y Distribuidor exclusivo;
Proyeccion Electronica de Mexico, S.A. de C.V. a: General E-mail: info@proyel.com.
Quote E-mail: sales3@proyel.com
Phone/Fax: 01-(55) 5273-5029
Direccion:
Benjamin Franklin No. 166 Desp. 1 Col. Escandon Deleg. Miguel Hidalgo C.P. 11800 Mexico, D.F.
Los demas paises de Latinoamerica: Ya pronto tendremos servicio en su Region. Si usted tiene alguna duda o comentario respecto a los servicios de Jameco, contacte con la empresa arriba mencionada en la Ciudad de Mexico, ellos le pueden ayudar.

PRICES
Prices are effective 04-14-03. Prices and discounts are subject to change without notice. We are not responsible for any typographical errors in this catalog. Photos are representative; product appearance may vary.

ONLINE INFORMATION
Get answers to frequently asked questions on the Jameco website at:
http://www.Jameco.com

SHIPPING INFORMATION

Guaranteed Delivery Time for UPS Ground (Business Days)
① day ② days ③ days
④ days ⑤ days ⑥ days

Orders received Mon.-Fri. by 6:00 p.m. Eastern Standard Time will be shipped the same day. Orders received Saturday and Sunday will ship the following Monday (except on holidays). If we are unable to fill your order on the day received, we will send you a gift certificate worth $5.00 towards your next Jameco purchase. This offer does not apply to orders waiting for credit approval or backordered items.

Options and Rates*

Shipping delivery times are based on working days.

Ground Service
Up to 6 working days for commercial address (up to 9 working days for residential). Guaranteed delivery times may vary depending on zip code. $6.50 for 1st 2 lbs.; $0.74 for each additional lb.

2-Day Air Service
$12.00 for 1st 2 lbs.; $1.50 for each additional lb.

Next Day Air Service
• $21.50 for AM delivery for 1st 2 lbs.; $1.95 for each additional lb.
• $16.00 for afternoon delivery for 1st 2 lbs.; $1.95 for each additional lb.

Priority Mail (USPS)
$4.75 for 1st lb.; $1.90 for each additional lb. Order must be placed before 5:00 p.m. Eastern Standard Time to ship same day.
Jameco reserves the right to rebill shipping surcharges for customer misaddressed packages

* The above rates apply to single box shipments that are less than 50 lbs. Please call for shipping quote on packages greater than 50 lbs.

International Shipping & Handling
Shipping is via courier or postal service, depending on your preference, insurance availability, and the size and weight of your package. Jameco will apply actual shipping charges with a nominal handling charge on all foreign orders. For mail-in customers, please include 25% for shipping charges or call for a shipping quotation. All returns that meet postal requirements must be sent prepaid via air parcel post. All courier shipments to Canada and Mexico require a certificate of origin. Jameco will provide a certificate of origin for a $25 processing fee.

POLICIES

Confirming Orders
Please do not send confirming orders. If company policy necessitates a confirming order, please mark "CONFIRMING" boldly on the first page of the order.

No Minimum Order
A $5.00 processing fee will be added to orders under $20.00.

Order Form

See page 201 for Ordering Information
Fax 1•800•237•6948   Order 24 hours/7 days a week!

Jameco, 1355 Shoreway Road, Belmont, CA 94002   Call: 1·800·831·4242   International TEL: 1·650·592·8097   FAX: 1·650·592·2503

1 **Ordered By**
We will ship to this address unless you enter a different ship to address.

Customer No.   **VIP No.** (see back cover)

_____
Company

_____
Name of Requisitioner   Title

_____
Name of Purchasing Agent   Title

_____
Street Address/PO Box Number

_____
City   State   Zip Code

Contact information (please provide all information and check method preferred)

(_____) _____
Daytime phone number - Required for Credit Card Orders

(_____) _____
Fax Number

_____
E-mail Address

☐ Please check this box if you prefer not to receive special offers via e-mail from Jameco.

2 **Ship To** (Only required if different)

_____
Company

_____
Name   Title

_____
Street Address/PO Box Number

_____
City   State   Zip Code

3 **Method of Payment**

☐ Prepaid (check enclosed)   ☐ C.O.D. ($7.00 service charge)

☐ Net 30 Days (Account must be previously established. Authorized P.O. # required.)

PURCHASE ORDER NO.: _____

☐ Credit Card

Credit Card users only: VISA   MC   AMEX   DISCOVER

Credit Card Number ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Exp. Date: Month ☐☐ Year ☐☐ Name on card _____

_____
Billing Address   Street/PO Box   City/State/Zip

4

ITEM NO.	QTY.	PART NUMBER	DATA SHEETS	DESCRIPTION	PAGE NO.	WEIGHT (LBS.)	UNIT PRICE	TOTAL
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

	TOTAL WEIGHT		SUB-TOTAL	

5 **Please Check Shipping Method Below**   UPS   FedEx Federal Express   (USPS)   AIRBORNE EXPRESS

☐ **Priority Mail (USPS)** ....$4.75 for 1st lb., $1.90 for each additional lb.
☐ **Ground** ....$6.50 for 1st 2 lbs., $0.74 for each additional lb.
☐ **2 Day Air Service** ....$12.00 for 1st 2 lbs., $1.50 for each additional lb.
☐ **Next Day Air Service** (AM delivery) ....$21.50 for 1st 2 lbs., $1.95 for each additional lb.
☐ **Next Day Air Service** (PM delivery) ....$16.00 for 1st 2 lbs., $1.95 for each additional lb.
☐ **Foreign Shipment** via Air Parcel Post ....Shipping approximately 25% of order total. Excess fees will be refunded. Additional shipping methods available

Some restrictions may apply. See order information on page 201 for other shipping methods and conditions of sale.
Shipping rate is based on a single package shipment.

Add $5.00 processing fee on orders under $20	
Please Add Applicable Sales Tax (California Only)	
Shipping (See Item 5)	
C.O.D. (add $7.00)	
Canada and Mexico Certificate of Origin ($25)	
Credit Memo (please attach)	–
TOTAL	

6 **JAMECO** *thanks you for Your Order!*

FOR OFFICE USE ONLY
_____ / _____

Color Code Legend
New   Sale   Qty. Save

Product Index

Red indicates new products found only on pages 2, 3 & 207-213; and not elsewhere.

Color Code Legend
New Sale Qty. Save

T1 Green Diffused LED

- Emitting color: green
- Lens: green diffused
- LED size: T1 (.119"/3mm)
- Typical Vf @ If: 2.1 @ 20
- Typical mcd @ mA: 12.6 @ 10
- Wavelength (nm): 565
- Dimensions (in.): (A) 0.13 x (B) 1.10 x (C) 1.17 x (D) .05 • More LEDs on pages 90-91
- 100 piece minimum

SALE

Part No.	Description	100	1000
211086CP	T1 green diffused LED	$.09	$.07

T1 Ultra-White LED

- Emitting color: white
- Lens description: water clear
- Diameter: .119"/3mm
- Lead spacing: 0.1"
- Typical Vf @ If: 3.8 @ 20
- Typical mcd @ mA: 3000 @ 20
- LED size: T1
- More LEDs on pages 90-91

Part No.	Product No.	1	10	100	1000
217525CP	MCDPW-3004C	$2.99	$2.85	$2.69	$2.55

20 Characters x 4 Lines Parallel LCD Module

- 5 x 8 dot matrix
- Yellow mode transmissive type LCD
- Yellow-green LED backlight
- 4-bit or 8-bit parallel interface
- LSI control HD44780 or equivalent and column driver MSM5259 or equivalent
- Display size: 3.0"W x 1.0"H
- Module size: 3.9"L x 2.4"W x 0.5"Thick
- More LCDs on pages 94-95

Power requirements: 5V @ 3.5mA (recommend P/N 164101CP, pg 51)

Part No.	Description	1	10
216012CP	20 x 4 LCD display	$29.99	$26.99

Spider Coupler Set

- Used with motors
- 1 set screw per hub
- Hub OD: 0.785"D x 0.743"L
- For 0.25" shaft diameter
- See pages 61-63 for motors

Part No.	Description	1	10	100
211166CP	Spider coupler set	$2.95	$2.39	$2.19

1 Amp Fuse with Pigtail

- 5mm x 20mm fuse
- 250V @ 1A
- Lead length: 1.5"
- More fuses on page 88 • 10 piece minimum

Part No.	Description	10	100
215431CP	1 Amp fuse w/ pigtail	$.13	$.12

Heat Sink with Fan

For Socket 7

- For Socket 7 (AT/ATX)
- Size: 1.95"W x 2.05"D x 1.37"H
- See page 155 for CPU fans

Part No.	Description	1	10	50	100
216506CP	Heat sink w/ fan...	$9.95	$8.95	$7.95	$7.95

RAF Electronic Hardware

Instrumentation Handles

- 5/8" oval diameter • 9/32" thick • 10-32 internal thread size
- More hardware products on page 116

SALE

Part No.	Description	L" x H"	Color / Base Metal	1	10	100
211158CP	Oval Handle	3.0 x 1.8	Black / Aluminum	$2.79	$2.35	$1.95
216821CP	Oval Handle	3.0 x 1.3	Nickel Plate / Brass	2.79	2.35	1.95

Grayhill Rotary DIP Switches

- Fully sealed construction
- Rotor and switch body: plastic (UL94V-0)
- Contact and terminal material: copper alloy plated
- Make and break current rating: 30mA @ 30VDC for 10,000 cycles
- **215992CP**: 0.1" x 0.3" pin spacing (standard through hole)
- **216004CP**: 0.1" pin spacing (right angle through hole)
- For more switches, see pages 96-100

215992CP   **216004CP**

Part No.	Product No.	Position	Adjust	Code type	W" x D" x H"	1	10	100	1000
215992CP	HAB16	16	Top	HEX	.39 x .39 x .20	$2.45	$2.10	$1.85	$1.55
216004CP	HAB10R	10	Side	BCD	.44 x .30 x .40	2.45	2.10	1.85	1.55

DIP Relays

215909CP   **215896CP**

215896CP

215909CP: P & B RKA-7DZ-12
- Contact voltage: 250VAC/24VDC • DPST-NO
- Contact current: 5A/5A • Pins: 6
- Coil voltage: 12VDC • Coil resistance: 270Ω

215896CP: OEG OJE-SS-109LMF
- Contact voltage: 250VAC/30VDC • SPST-NO
- Contact current: 3A/3A • Pins: 4
- Coil voltage: 9VDC • Coil resistance: 400Ω

Part No.	L" x W" x H"	1	10	50	100
215909CP	1.13 x .49 x .97 ..	$2.29	$1.95	$1.69	$1.39
215896CP	0.71 x .39 x .57	2.29	1.95	1.69	1.39

0 to 1.45 PSI Pressure Sensor

- Typical full scale span @ 35mV: 0-10kPa (0-1.45 PSI)
- Maximum pressure (P_{MAX}): 75kPa (10.875 PSI)
- Operating voltage (typical): 3VDC @ 6mA
- Applications: air movement control, level indicators, leak detection, robotics and industrial controls
- $\frac{1}{8}$" diameter tubing applicable
- Size: 0.7" Dia. x 0.78" Thick (with nozzle)

Part No.	Product No.	1	10	100
218827CP	MPX10GS	$8.99	$8.29	$7.49

EMI Suppression Cores with Case

Reduce Electro Magnetic Interference (EMI) with a snap of these suppression cores around a power cord or data cord. Easy to install and an affordable way to reduce EMI without redesigning your product.

Open   **Closed**

218173CP: 0.64" outside dia. x 0.20" inside dia. x 1.15"L
217841CP: 0.78" outside dia. x 0.34" inside dia. x 1.40"L

Part No.	Description	1	10	100
218173CP	EMI suppressor	$.99	$.89	$.79
217841CP	EMI suppressor 1.45		1.29	1.15

AC Power Outlet

- AC power outlet, female, flanged
- Voltage current: 250VAC @ 10A
- Fast-on terminals
- Terminal size: 0.189"
- Dimensions: (A) 1.97" x (B) 1.14" x (C) 1.27" x (D) 1.58"
- UL/CSA/VDE approved

Part No.	Product No.	1	10	100	500
218288CP	0708-1-CQ	$.89	$.79	$.72	$.65

Power Entry Filters

- Straight, flanged
- Voltage @ current: 250VAC @ 10A
- UL/CSA/VDE approved

217744CP:
- Fast-on terminals
- Terminal size: 0.25"
- Dimensions: (A) 1.96" x (B) 0.89" x (C) 2.227" x (D) 1.58"

220206CP:
- Solder terminals
- Terminal size: 0.16"
- Dimensions: (A) 1.96" x (B) 0.87" x (C) 2.16" x (D) 1.58 "
- More power filters on page 46

217744

Part No.	Product No.	1	10	100	500
217744CP	10AE1	$9.95	$8.95	$8.09	$7.29
220206CP	10GEEG3E	8.49	7.65	6.89	6.19

Infrared Remote-Control Receiver Module

- Commonly used in TVs, VCRs, audio equipment, car stereos, and home computers that receive signals or data via infrared
- Single unit module incorporates which a PIN diode and receiving pre-amplifier IC
- Voltage input: 5.5V @ 3mA
- 940nm wavelength
- Excellent mechanical strength and electrical stability
- Size: 0.6"L x 0.6"W x 0.5"H

Part No.	Description	1	10	100	1000
218270CP	38.0kHz, side view	$2.99	$2.69	$2.39	$1.99

Xcelite® Diagonal Cutters

Manufactured from the finest forged alloy steel with polished head and cushion comfort handles, these cutters are designed for the demands of engineers and manufacturing environments.

Choose the finished cut best for your projects

STANDARD SEMI-FLUSH FLUSH

- Flush or semi-flush cutting edge handles most cutting requirements
- Cutting edges machine ground and electronically hardened for extended life
- Forged alloy steel w/ polished head for high durability
- Patented COPALOY rivet construction provides smooth operation and long life
- Handle coil springs for fast cutting action
- ESD safe cushion grips for maximum comfort

Expanded Xcelite Professional Tools

217904CP: Flush cutting of leads in restricted spaces; narrow tip gives increased clearance

217955CP: Used for cutting component leads

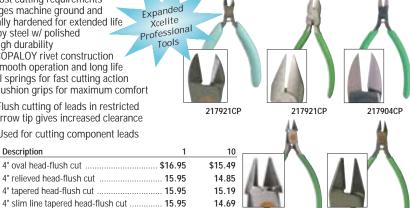217921CP   217921CP   217904CP

218034CP   217867CP

Part No.	Description	1	10
217921CP	4" oval head-flush cut	$16.95	$15.49
217955CP	4" relieved head-flush cut	15.95	14.85
217904CP	4" tapered head-flush cut	15.95	15.19
217867CP	4" slim line tapered head-flush cut	15.95	14.69
218034CP	4" slim line tapered semi-flush cut	15.95	14.85

Ballpoint Allen Hex Socket-Type Screwdriver Set

- Unique ball point tip ideal for tightening and removing Allen socket screws in hard-to-reach spots or need a quicker way to drive them home
- Will engage screwheads from any angle
- Ends precision-machined to close tolerances to help slip easily into sockets and hold securely without reaming

Kit includes: 99X5 extension, 991 handle, 9 pcs of 4" long blades (.05, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16), plastic see-through case

Ballpoint tips

Part No.	Description	1	5
217859CP	Screwdriver set	$64.95	$61.79

Allen Hex Socket-Type Screwdriver Set

- Inch size • 11-piece set • See-through plastic case

Kit includes: Regular handle, extension bar, .05, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16 blades

Part No.	Description	1	5
217912CP	Screwdriver set	$43.95	$40.95

28-Piece Cellular Phone Services Tool Kit

The mobile kit for mobile phones.

- 4" micro cutting pliers
- 5" snipe nose pliers
- 4-piece screwdriver set (M1.7, M2.0, M2.3, M2.6)
- 8-piece PRO-SOFT duplex screw drivers (5mm; 6mm; T5, T6, T8, T10, #1 Phillips, 5 slotted)
- Stainless tweezers • 6 piece soldering aid kit
- Solder wick • Solder core
- Hot air tip • Self igniting micro torch
- S-needle tip • 2-piece precision screwdriver
- Size: 11.9"L x 9.8"W x 1.9"H

Part No.	Description	1	5
218202CP	Cellular phone tool kit	$66.95	$59.95

8-Piece Compact Tool Kit

The perfect size and tools for quick repairs.

- 5" side cutter
- 5" long nose pliers
- PRO-SOFT 3 x 75mm slotted screwdriver
- PRO-SOFT #0 x 75mm Phillips screwdriver
- Stainless tweezers • Solder core • Desoldering pump
- Portable gas soldering iron with torch tip
- Size: 8.1"L x 5.7"W x 1.4"H

Part No.	Description	1	5
218181CP	8-piece tool kit	$21.95	$19.95

Xcelite® Needle Nose Pliers

217891CP   217963CP   217998CP

217891CP: Serrated jaws
- Positive gripping of fine wire or subminiature components
- Fine point allows use in confined areas

217963CP: Fine serrated jaws • General purpose

217998CP: Smooth jaws
- General purpose for pick-up and wire forming

Part No.	Description	1	10
217891CP	4" submini needle nose	$14.95	$13.69
217963CP	5.5" thin long nose	16.95	15.49
217998CP	5" thin long nose	16.95	15.79

Xcelite® 6.5" Snip Tool

- Shearing action of 1.5" cut pointed blades prevent peaks on fine wires and filaments
- Useful for removing insulation and cutting light sheet metal
- Coil spring opens blades
- Safety latch
- Plastic coated cushion grips provide maximum leverage

Part No.	Description	1	10
218026CP	Snip tool	$29.95	$28.15

Xcelite® 6-Piece Pliers Kit

- A compact kit designed for an electronics technician or dedicated hobbyist
- Durable pocket-pouch with heavy duty snaps
- Each professional quality tool features the unique Copaloy rivet for smoother action

Kit includes: 4.5" transverse end cutting pliers, 4" diagonal cutting pliers, 5" long nose pliers with side cutters, 5" fine tip needle nose pliers, 5" flat nose pliers, and 5" long nose pliers

Part No.	Description	1	5
218051CP	6-piece pliers kit	$109.95	$103.89

Xcelite® Screwdriver Set

- Inch size
- Handles more jobs with fewer tools, saves bench space and lightens service kits
- Equipped with remarkable black, "piggyback" torque amplifier handle
- Color coded handles • Clear plastic case

Kit includes: green 3/32, red 1/8, black 5/32, orange 3/16, amber 1/4", blue #0 Phillips, brown #1 Phillips, amber #2 Phillips, and black torque amplifier handle

Part No.	Description	1	10
218069CP	Screwdriver set	$27.95	$26.29

60-Piece Bit, 1/4" Socket and Driver Tool Kit

This compact kit contains the most popular bits and 1/4" sockets with a comfortable cushioned, reversible ratchet driver handle.
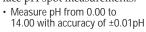
- Drill bits 1/16", 3/32", 1/8", 5/32", 3/16"
- Socket bits 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 7/16", 1/2", 5mm, 6mm, 7mm, 8mm, 9mm,10mm, 11mm, 12mm, 13mm
- Phillips bits #1, #2, #3
- Phillips Z bits 1, 2, 3
- Slotted bits 1/8", 5/32", 3/16", 1/4", 9/32"
- Hex bits 5/64", 3/22", 1/8", 5/32", 3/16", 7/32", 1/4"
- Torque bits T-10, T-15, T-20, T-25, T-30, T-40
- Square bit 1, 2, 3
- Reversible ratchet screwdriver
- 7.5" Flexible extension
- 2.4" Magnetic bit adapter
- Socket adapter
- 6" long nose pliers
- 6" adjustable wrench
- Vinyl zipper case with organizer to find sizes fast
- Size: (case) 8.5"L x 6.5"W x 2.2"H

Part No.	Description	1	5
218261CP	60-piece tool kit	$36.95	$32.95

ExStik pH Water Proof Meters

This compact, portable pH meter provides a low-cost method for monitoring pH. Ideal for measuring chlorine in drinking water, cooling towers and waste water discharges. Waterproof design floats in water and protects the meter in wet environments. Flat surface electrodes also provide surface pH spot measurements.

- Measure pH from 0.00 to 14.00 with accuracy of ±0.01pH
- Measures temperature from 23˚F to 194˚F (-5˚C to 90˚C)
- Smart chip predicts pH electrode performance with "RENEW" indicator when replacement is needed
- "CAL" indicator alerts user to recalibrate
- Large 3½-digit display with bar graph
- Bar graph originates at neutral point (7.0pH) and fluctuates to the left or right depending on the measurement
- Automatic temperature compensation
- Simultaneous display of pH and temperature
- Tripak buffers: 6 each of 4, 7, 10 pH and 2 rinsing solutions
- Size: 6.8"L x 1.6"W x 1.4" Thick
- Weight: 0.3 lbs.

Includes: Meter and electrode, protective sensor cap, sample cup, 4 LR44 button batteries, and neckstrap

Part No.	Description	1	5
218122CP	pH waterproof meter	$78.95	$74.95
218131CP	Tripak buffers for calibration	24.95	23.69
218165CP	Carrying pouch	18.95	17.95

Vane Thermo-Anemometer

Remote vane rotates freely to measure airflow and temperature. Ideal for checking performance of fans, blowers, exhaust hoods and HVAC applications.

EXTECH INSTRUMENTS

- 2.83" remote vane wheel
- Data hold function
- Super large 0.7" LCD display
- Measures air velocity as ft/min, m/s, km/h, knots
- Utilizes Type K sensor for thermometer measurements in the range of 32˚F to 140˚F (0˚C to 60˚C) with accuracy of 1.5˚F (0.8˚C) with 0.1˚ resolution
- Durable housing case and sensor made of ABS plastic with 39" cable
- Size: 6.6"L x 3.2"W x 1.2"Thick
- Weight: 0.8 lbs.

Includes: Sensor, hard vinyl carrying case, and 9V battery

Part No.	Description	1	5
218093CP	Thermo-anemometer	$198.95	$179.95

Pressure Sensitive Wire Markers

Easy release vinyl cloth markers feature a strong, pressure-sensitive adhesive, for long lasting bond on a wire or cable. Black non-smear legends on white background for easy identification.

SALE

- Convenient pocket-size booklet
- 10 sheets numbered 1 to 45 each sheet

Part No.	Product No	1	10	100
216813CP	TCWM-3	$12.95	$11.65	$8.95

3999-Count Multimeter with RS-232 and Analog Bar

- 3¾-digit LCD display with analog bar (0.6" digit height)
- Computer interface (RS-232); DB9 male to female cable with DOS/Windows® software (3.5" diskette)
- Automatic polarity indication
- Data hold/range hold function
- Resolution: 100uV maximum
- **DC voltage ranges**: 400mV-1000V
- **AC voltage ranges**: 400mV-750V
- **DC/AC current ranges**: 4mA-20A
- **Resistance ranges**: 400Ω-4MΩ
- Diode and continuity test
- Size: 3.3"W x 1.5"D x 7.3"H   • Weight: 1.9 lbs.

METEX®

Includes: Probes, 9V battery and manual

Part No.	Model No.	1	10
216514CP	ME-31	$59.95	$53.95

3999-Count Multimeter with RS-232 and Analog Bar and Temperature

- 3¾-digit LCD display with bargraph (0.6" digit height)
- Automatic polarity indication
- Range hold function
- Computer interface (RS-232); DB9 male to female cable with DOS/Windows® software (3.5" diskette)
- Resolution: 100uV max.
- **DC voltage ranges**: 400mV-1000V
- **AC voltage ranges**: 400mV-750V
- **DC/AC current ranges**: 4mA-20A
- **Resistance ranges**: 400Ω-4MΩ
- **Capacitance ranges**: 4nF-400nF
- **Temperature ranges**: -4˚F-2000˚F
- Continuity, diode and transistor hFE test
- Size: 3.2"W x 1.5"D x 7.3"H   • Weight: 1.7 lbs.

METEX® **(reading in ˚F only)**

Includes: Probes, K-type temperature probe, software, 9V battery and manual

Part No.	Model No.	1	10
216522CP	ME-32F	$79.95	$69.95

Westinghouse 30-Watt Table-Top Switching Power Supply

- Output voltage @ current (min.-max.): +5VDC @ 0.3-3A, +12VDC @ 0-0.8A, -12VDC @ 0-0.8A
- Input voltage: 85-264 @ 47-63Hz
- Input connector: 3-prong power receptacle
- Mating power cord: recommend P/N 38050CP, pg 47
- Output connector: 5-pin DIN male with 4' cable
- Size: 5.8"L x 3.0"W X 1.7"H

Ground 1 • 3 +5VDC@3A
-12VDC@0.8A 4 • • 5 +12VDC@0.8A
Ground 2
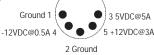
Part No.	Product No.	1	10	50	100
211191CP	FSA30P31	$39.95	$35.95	$32.49	$29.15

Fortron Source 45-Watt Table-Top Switching Power Supply

- Output voltage @ current (min.-max.): +5VDC @ 1-5A, +12VDC @ 0.5-3A, -12VDC @ 0.1-0.5A
- Input voltage: 85-264 @ 50-60Hz
- Input connector: 3-prong power receptacle
- Mating power cord: recommend P/N 38050CP, pg 47
- Output connector: 5-pin DIN male with 4' cable
- Size: 7.0"L x 3.8"W x 2.2"H   • Weight: 1.6 lbs.
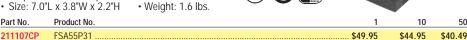
SALE

Ground 1 • 3 5VDC@5A
-12VDC@0.5A 4 • • 5 +12VDC@3A
2 Ground

Part No.	Product No.	1	10	50
211107CP	FSA55P31	$49.95	$44.95	$40.49

Color Code Legend
New Sale Qty. Save

Battery Holders

Eliminate battery retention problems in portable DC power applications and products. High-retention snaps are made from special materials that maintain retention properties longer than conventional snaps. They can be with leads, or attached to battery holders.

Part No.	Product No.	Fig.	No. Of Cells	Connector	Sides	Features	1	10	100	500
216071CP	BH-311-2A	1	1-AA	Wires	Single		$.69	$.59	$.54	$.49
216080CP	BH-321-2A	3	2-AA	Wires	Single		.69	.59	.54	.49
216098CP	BH-321-4A	3	2-AA	Wires	Single	With mounting tabs	.69	.59	.54	.49
216101CP	SBH-321-2A	5	2-AA	Wires	Single	With cover, no switch	.79	.69	.64	.59
216119CP	SBH-321-1AS	5	2-AA	Wires	Single	With cover and switch	.79	.69	.64	.59
216127CP	BH-322-1B	4	2-AA	Snaps	Dual		.69	.59	.54	.49
216135CP	BH-331-A	6	3-AA	Snaps	Single		.89	.79	.74	.69
216143CP	SBH-331-AS	7	3-AA	Wires	Single	With cover and switch	.99	.79	.75	.68
216151CP	BH-341-2A	8	4-AA	Wires	Single		.99	.89	.84	.79
105857CP	—	12	4-AA	Wires	Single	Wires with connector	.89	.75	.68	.59
216160CP	BH-342-A	9	4-AA	Wires	Dual		.69	.53	.47	.43
216178CP	BH-343-1A	10	4-AA	Wires	Dual		.75	.55	.49	.45
216186CP	SBH-341-1AS	13	4-AA	Wires	Single	With cover and switch	1.09	.89	.85	.75
216194CP	BH-341-2B	8	4-AA	Snaps	Single		.76	.59	.53	.47
216207CP	BH-343-1B	10	4-AA	Snaps	Dual		.99	.89	.84	.79
216215CP	BH-363-A	15	6-AA	Wires	Dual		.95	.79	.69	.65
216223CP	BH-364-A	14	6-AA	Wires	Single		.95	.79	.72	.65
216231CP	BH-363-B	15	6-AA	Snaps	Dual		.99	.75	.69	.65
216240CP	BH-383-A	17	8-AA	Wires	Dual		1.19	.99	.89	.85
216258CP	BH-382-B	16	8-AA	Snaps	Dual		1.19	.99	.89	.85
216266CP	BH-383-B	17	8-AA	Snaps	Dual		1.19	.99	.89	.85
216274CP	BH-411-1A	1	1-AAA	Wires	Single		.69	.59	.54	.49
216282CP	BH-421-1A	3	2-AAA	Wires	Single		.69	.59	.54	.49
216291CP	SBH-421-AS	5	2-AAA	Wires	Single	With cover and switch	.79	.69	.59	.49
216303CP	BH-431-1A	6	3-AAA	Wires	Single		.89	.79	.74	.69
216311CP	SBH-431-1AS	7	3-AAA	Wires	Single	With cover and switch	.79	.69	.59	.49
216320CP	BH-441-1A	8	4-AAA	Wires	Single		.99	.89	.84	.79
216338CP	SBH-441-AS	13	4-AAA	Wires	Single	With cover and switch	1.39	1.15	1.05	.95
216346CP	BH-211-A	1	1-C	Wires	Single		.62	.56	.51	.44
216354CP	BH-221-A	3	2-C	Wires	Single		1.09	.99	.94	.84
216362CP	BH-242-1A	11	4-C	Wires	Single		1.39	1.29	1.09	.99
216371CP	BH-111-1A	1	1-D	Wires	Single		.69	.59	.54	.49
216389CP	BH-121-1A	3	2-D	Wires	Single		.89	.75	.69	.59
216397CP	BH-121-1B	3	2-D	Snaps	Single		.99	.85	.75	.69
216400CP	BH-142-A	11	4-D	Wires	Single		1.19	.95	.85	.75
216418CP	BH-143-1A	8	4-D	Wires	Single		1.15	.89	.81	.74
216426CP	BH-9V-A	2	1-9V	Wires	Single		.79	.69	.64	.59
216434CP	BH-511-1A	1	1-N	Wires	Single		.69	.59	.54	.49
38535CP	2S2032	18	1-CR2032	PC Mount	Coin Cell		.59	.49	.35	.25
38543CP	2S2325	18	1-CR2354 or 2-CR2325	PC Mount	Coin Cell		.89	.71	.53	.37
196744CP	2032SM	18	1-CR2032	Surface Mount	Coin Cell		.25	.22	.20	.18

Fig. 1 **Fig. 2** **Fig. 3**
Fig. 4 **Fig. 5** **Fig. 6**
Fig. 7 **Fig. 8** **Fig. 9**
Fig. 10 **Fig. 11** **Fig. 12**
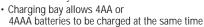**Fig. 13** **Fig. 14** **Fig. 15**
Fig. 16 **Fig. 17** **Fig. 18**

Non-Shorting 9V Battery Snap

• Use with standard 9V battery
• Black rigid cover
• Fully insulated snaps to protect 9V battery contacts
• 26 AWG
• Snap terminals: brass, nickel plated
• Leads are color coded, stripped and tinned
• Male outer diameter: 0.225"
• Female inner diameter; 0.125"
• Dimensions: 1.0"L x 0.5"W

Part No.	Description	1	10	100	1000
216451CP	6 prong batt snap	$.34	$.30	$.20	$.18

NiMH Battery Charger

Charge your AA or AAA NiMH batteries with this 8-hour battery charger. Simply plug into a wall outlet. Red LED indicates charging and green LED indicates ready to use.

• Charging bay allows 4AA or 4AAA batteries to be charged at the same time
• Output: 4AA 1.35V @ 250mA or 4AAA 1.35V @ 95mA
• Size: 2.8"W x 2.4"D x 4.6"H   • Weight: 1.0 lb.

Part No.	Description	1	10
217533CP	Plug-in charger	$7.95	$6.95

Steel Fish Tapes

Fishing wires inside finished walls or through conduit is not fun. But with our steel fish tapes, you won't have to spend all day finishing the job. Designed specifically to make the retrieval of wires quick and easy.

• Impact resistant yellow ABS case won't rust or dent
• Finger grips around reel to ensure easy control
• Trigger provides constant pressure tension while retracting

Part No.	Length	1	10	25
217470CP	50'	$27.95	$25.95	$22.95
217488CP	100'	46.95	42.95	39.95
217496CP	200'	62.95	58.95	54.95

Polyolefin Heat Shrink Tubing

• Dielectric strength: 1300V   • Shrink temperature: 121˚C   • Flexible
• Flame retardant   • Length: 3" (1 meter)

Part No.	Diameter Before	Diameter After	1	10	100
216477CP	1/2"	1/4"	$.99	$.89	$.85

AUI/10BaseT Transceiver

This transceiver provides connectivity with work stations equipped with AUI ports to 10BaseT ethernet local area network. Switch selectable SQE (signal quality error)/"Heartbeat Test" to detect collision circuitry in operation.

- IEEE 802.3 10BaseT compliancy
- 4 LED indicators for receive, transmission, collision and link • SQE enable/disable switch
- AUI 15-pin male connector, RJ45 connector
- Size: 2.3"L x 1.7"W x 0.8"H • Weight: 0.2 lbs.

Part No.	Description	1	10
215917CP	Ethernet transceiver	$29.95	$27.95

6-Outlet Surge Protector

- Standard 6-outlet surge suppressor
- Heavy-duty power cord (14AWG x 3)
- RESET/OFF switch with built-in 15A circuit breaker
- Clamping voltage: 400V
- Maximum surge dissipation: 900 joules
- Maximum surge voltage: 6500V
- Maximum spike current: 4500A • Weight: 0.9 lbs.

Part No.	Description	1	10	100
216485CP	Surge suppressor	$6.95	$6.25	$5.59

Data VAC PRO Vacuum/Blower

**Carrying case
219248CP**

The Data-Vac "PRO" Series has plenty of power for the toughest jobs plus a toner filter system that picks up dangerous toner spills from laser printers and copiers. So, the "PRO" is perfect for cleaning all types of office equipment—from micros to mainframes, laser printers, copiers, fax machines, disc drives, calculators, electronic typewriters, and automatic teller machines.

Well-run offices know computer downtime and repairs cost dearly. With Data-Vac you can keep your equipment running clean all the time. Data-Vac "PRO" is inexpensive and user friendly.

Includes: 6' flexible hose, pik-all air pin pointer, crevice tool, snap in brush, soft bristle dusting brush, snorkel probe, air maximizer, adapter nozzle, flexible neck extension wand, micro dusting brush and micro crevice tool

Part No.	Description	1	5
219213CP	Data VAC PRO vacuum	$148.95	$139.95
219248CP	Carrying case	57.95	55.95
219230CP	Toner replacement bags (5pk) ..	34.95	29.95
219221CP	Disposable paper bags (5pk) ...	5.95	5.49

Fellowes Premium Confetti-Cut Personal Shredder

When it's time to discard sensitive memos, bank statements, accounting records or other confidential business materials, you want to rest assured that they're gone for good. The PS60C-2 features faster throughput, greater capacity and a finer cut so your documents will disappear in short order. Do not let prying eyes poach business records. Let this model's confetti-cutting power turn that stack of confidential paperwork into a handful of scrambled dregs with shredded ease.
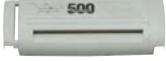
Shredded pieces (Confetti-cut)

Part No.	Description	Price
219176CP	Fellowes premium medium-duty confetti-cut personal shredder (refurbished)	$49.95

Fellowes Personal Strip-Cut Shredder

Protect yourself from prying eyes and "dumpster divers" with a personal shredder that's packed with features. The P500-2 is designed to go anywhere you need it. Auto-start and stop means you can feed in up to 7 sheets at a time (staples, paper clips and all!) with one-handed ease; no fumbling for a switch. And at this price, you can turn every wastebasket in your home or office into a maximum security receptacle.

Shredded pieces (Strip-cut)

Part No.	Description	Price
219184CP	Fellowes personal strip-cut shredder	$9.95

Solar Outdoor Security Light

Dark spots around your business, house or neighborhood are vulnerable to vandalism or burglary. To protect your property, equip it with our new outdoor security lights and motion sensors. This solar outdoor security light has all the answers to your needs. All you need are simple tools to mount the unit to the wall. No complicated wiring or electrician needed. The built-in batteries are rechargeable by sunlight, so if the main power goes out you still have security lighting. The solar panel, which has a 12-foot cord, can be positioned for optimum light exposure.

- Lights up to 60 times on a single charge
- Charges by day, lights by night
- Complete with built-in motion detector, rechargeable battery and bright halogen light • Easy to install • Weight: 7.1 lbs.

Part No.	Product No.	Description	1	10
219580CP	223	Solar outdoor security light	$79.95	$74.95

Personal Security Essentials

World Band Portable Solar Radio

This portable solar radio is an essential for emergency preparedness when you need to be updated about what is happening in the news, weather and police beat. With the InfoMate® radio you will never depend on batteries again. The InfoMate® radio can be powered and recharged by AC adapter, cigarette lighter adapter, sunlight or built in hand generator. Keep one on your window sill or plugged in if you happen to live in an area subject to severe weather conditions, earthquakes, floods, fires, etc. You will always have access to the latest emergency information.

- 11 bands: AM (530-1700kHz, AM std.)/FM (88-108MHz), TV1 (Channel 2-6), TV2 (Channel 7-13). Aircraft (112MHz, commercial air), VHF (145-175MHz, taxi/police/business radio), National Weather Band Service, SW1-SW4
- Guide book developed in association with the National Weather Service
- 4 power sources: AC adapter, vehicle adapter, solar power (rechargeable batteries) and dynamo generator
- Low battery LED indicator tell you when your battery charge level is running low
- Tuning LED indicator helps locate situations on your scale
- Size: 8.6"W x 3.0"D x 5.3"H • Weight: 1.0 lb.

Includes: High quality earplugs, 12V car cigarette lighter charging cord, AC/DC wall adapter (UL approved), a pack of 4 Ni-Cad batteries and manual

Part No.	Product No.	Description	1	10
219299CP	837-D	World band portable solar radio	$69.99	$66.49

Weller® Analog Soldering Station

- Innovative heater and sensor combination for quick heat-up and rapid temperature recovery
- Tip temperature offset capability allows user to reset temperature readings to match tip size and style
- Wireless temperature lockout
- Auto power-down after 90 minutes of inactivity
- Temperature range: 350˚F to 850˚F (177˚C – 454˚C)
- Temp. accuracy: ±90F (±5˚C)
- Size: 5.9"L x 4.5"W x 3.6"H
- ESD safe
- Weight: 4.0 lbs.

Part No.	Product No.	Description	1	10
217461CP	WES51	Analog soldering station	$115.95	$105.95

Laser and Contact Tachometer

This combination non-contact and contact laser tachometer is ideal for measuring the revolving speed of fans, motors, gears, pumps, conveyors, and elevators.

EXTECH INSTRUMENTS

- Photo tachometer range: 10 to 99,999 RPM with accuracy of ±0.05% + 1 digit
- Contact tachometer range: 0.5 to 19,999 RPM w/ accuracy of ±0.05% + 1 digit
- Measures from up to 6.5 feet from the target for improved safety and accessibility
- Memory stores last, maximum and minimum readings
- Display characters reverse direction for measurement type selected
- Large 0.4" (5-digit) LCD display
- Weight: 0.7 lbs.

Includes: 4-AA batteries, tips and wheel for RPM or linear surface speed, reflective tape, and carrying case

Part No.	Description	Weight	1	5
218106CP	Laser contact tachometer	0.7 lbs.	$278.95	$264.95

16kB-256MB Universal IC Programmer/Tester

Parallel Port Interface

Five times faster than its predecessor the ALL-11C, this programmer supports a variety of device types covering EPROM, EEPROM, Serial PROM, FLASH, PLD/CPLD/FPGA, MPU/MCU and much more. Most programmable devices in DIP, SDIP, SOP, SSOP, TSOP, PLCC, QFP, or BGA package type can be programmed on the on-board 40-pin ZIF socket or through an appropriate adapter/converter. High-speed parallel port is provided to connect to the majority of notebook or desktop PCs that run on Windows® 95/98/NT/2000/XP. It features modular pin drivers to provide excellent programming at high speed, reliability and expansion capability.

- Over 7,000 programmable devices
- Runs on windows with functions of load file, read master, program, verify, auto, ID check, checksum, blank check, erase, secure, protect/unprotect, edit, file transfer, function configuration and self test

Includes: External power supply, DB15 male to female cable, manual and software drivers on CD-ROM

System Requirements: Intel Pentium or compatible with 32MB of RAM, available parallel port, Windows® 95/98/NT/2000/XP operating system, 5MB free hard disk space, CD-ROM drive

Part No.	Description	1	10
216039CP	ALL-11C2 programmer	$899.95	$799.95

TEMPEST
Lead Acid Batteries

- Two-year warranty
- Sealed
- Rechargeable
- UL approved
- Color-coded terminals

Tempest is an ISO-9001 Certified Company

Part Number	Product Number	Nom. Volt.	Amp-Hrs.	Charging Voltage		Cross Reference			Size L" x W" x H"	Wt. (lbs.)	Pricing	
				Standby	Cyclic	Panasonic	YUASA	Eagle Picher			1	10
218309CP	TR1.3-6	6	1.3	6.8-6.9	7.25-7.45	LC-R01R3P	NP01.2-6	CF6V1.6	3.8 x 1.0 x 2.0	0.7	$7.89	$7.39
155328CP	TR4-6	6	4	6.75-6.9	7.2-7.5	LCR6VP	NP4-6	CF16V4	2.8 x 1.9 x 4.0	1.8	10.49	9.25
218317CP	TR5-6A	6	5	6.8-6.9	7.25-7.45	LCR6V4PL	NP4-6	CF6V4.5	2.8 x 1.9 x 4.0	2.1	10.95	9.85
218325CP	TR5-6B	6	5	6.8-6.9	7.25-7.45	—	—	—	2.6 x 2.6 x 3.8	2.2	11.45	10.49
218333CP	TR7-6	6	7	6.8-6.9	7.25-7.45	LC-R067R2P	NP7-6	CF6V7	6.0 x 1.3 x 3.8	3.0	12.95	10.29
218341CP	TR8-6A	6	8	6.8-6.9	7.25-7.45	—	—	CF6V8	3.9 x 2.2 x 4.5	3.8	14.95	13.59
175054CP	TR10-6	6	10	6.75-6.9	7.2-7.5	LCR6V10P	NP10-6	CFM6V10	5.9 x 2.0 x 3.8	4.3	14.95	13.45
218350CP	TR12-6A	6	12	6.8-6.9	7.25-7.45	LC-R0612P	NP10-6	CF6V12	5.9 x 2.0 x 3.8	4.6	15.95	12.49
218368CP	TR14-6TH	6	14	6.8-6.9	7.25-7.45	—	—	—	4.3 x 2.8 x 5.5	6.0	25.95	23.49
218376CP	TR0.8-12	12	0.8	13.6-13.8	14.5-14.9	—	NP0.8-12	—	3.8 x 1.0 x 2.4	0.8	15.95	14.49
218384CP	TR1.3-12	12	1.3	13.6-13.8	14.5-14.9	LC-R121R3PU	NP1.2-12	CF12V1.3	3.8 x 1.7 x 2.0	1.3	14.95	13.49
159661CP	TR2.3-12	12	2.3	13.5-13.8	14.4-15	LCR12V2.2P	NP2.3-12	CF12V1.5	7.0 x 1.3 x 2.3	1.9	14.95	13.49
218392CP	TR2.9-12	12	2.9	13.6-13.8	14.5-14.9	—	—	—	3.1 x 2.2 x 3.9	2.5	17.95	16.49
218405CP	TR3.2-12	12	3.2	13.6-13.8	14.5-14.9	LC-R123R4P	NP3.2-12	CF12V3	5.3 x 2.7 x 2.4	3.1	19.95	17.95
155336CP	TR4-12	12	4	13.5-13.8	14.4-15	LCR12V4PF	NP412	CF12V4	3.6 x 2.8 x 4.0	3.4	17.95	16.19
218413CP	TR5-12	12	5	13.6-13.8	14.5-14.9	LC-R125P	NP5-12	—	6.6 x 6.9 x 4.9	21.1	17.95	16.49
155344CP	TR7-12	12	7	13.5-13.8	14.4-15	LCR12V7.2BP	NP712	CFM12V65	6.0 x 2.6 x 4.0	5.9	17.95	15.95
168188CP	TR12-12	12	12	13.5-13.8	14.4-15	PS12120	—	CFM12V12	5.9 x 3.8 x 3.8	9.0	30.95	26.95
218421CP	TR22-12	12	22	13.6-13.8	14.5-14.9	—	—	—	7.2 x 3.0 x 6.6	15.0	39.95	35.95
218430CP	TR26-12	12	26	13.6-13.8	14.5-14.9	—	NP24-12	CFM12V2	6.6 x 6.9 x 4.9	21.1	54.95	48.49
218448CP	TRU1-34	12	34	13.6-13.8	14.5-14.9	—	—	—	7.8 x 5.2 x 6.2	25.6	57.95	52.95
218456CP	TR55-14	12	55	13.6-13.8	14.5-14.9	—	—	—	9.0 x 5.4 x 8.2	39.7	94.95	88.49
218464CP	TR70-12B	12	70	13.6-13.8	14.5-14.9	—	—	—	10.3 x 6.7 x 8.2	55.1	148.95	134.95

OfficeJet Four-In-One – The Small Office Solution!

Save time and space in your home office or cubicle. This HP multifunctional unit allows you to print, fax, scan and copy for less than many single function units. Professional quality color or black and white **printer** is at your command in your format of choice: letter, legal, executive, #10 envelope, card stock, or transparency film. Clear and fast **faxes** with transmission speed of 6 seconds per page at 300dpi grayscale, and 150 pages of memory. Full featured **copier** with 50% to 200% reduction or enlargement, and makes up to 99 copies at once. Sheet-fed color **scanner** saves you time with clear, crisp 24-bit color or 8-bit grayscale scans.

- Color copy @ 3.5 minutes per page, or black and white @ 1 minute per page
- Prints black and white @ 3.5ppm and color @ 1ppm
- 150 sheet tray capacity
- ITU group fax 3 compatible
- Scanner supports 300dpi to 1200dpi enhancement
- Size: 17.0"W x 14.2"D x 10.2"H (with tray installed)
- Parallel port interface
- 100 speed dial memory
- Modem speed of 300bps to 14,400bps
- Weight: 15 lbs.

Includes: CD-ROM manual and drivers

Special Purchase Low Price

Part No.	Description	Price
211043CP	HP OfficeJet 600 four-in-one unit..	$179.95
182967CP	Black ink cartridge..	35.95
182975CP	Color ink cartridge..	36.95

For other printers see page 159.

3M Portable Vacuum

Avoid inhaling tiny airborne toner particles that almost all vacuums blow out their exhaust. Designed for clean-up of hazardous material, 3M's Government Solutions Division has created this powerful 1HP/5A vacuum with a fully enclosed disposable HEPA filter providing 99.97% efficiency at 0.3 microns. Preferred by service professionals everywhere because of its portability and quick setup, the ingeniously designed compact heavy duty case is the vacuum. All attachments, the power cord, and even the 10' super stretch hose fit conveniently in the case. The motor has factory sealed ball bearings to stand up to even the most demanding tech professionals.

219555CP

Replacement filter 219563CP

- Size: 17.8"L x 7.8"W x 9.3"H
- Weight: 10.3 lbs.

Includes: 10' super stretch hose, crevice nozzle, tubular nozzle, dusting brush and type 2 filter

Part No.	Product No.	Description	1	5
219555CP	SV497AJM	Electronic portable vacuum with case	$249.95	$234.95
219563CP	SV497AJM	Type II filter for P/N 219555CP	21.95	19.95

For Data VAC PRO Vacuum/Blower see pages 211.

Xcelite Heavy Duty Nut Driver Kit

This set of heavy-duty nut drivers are ideal for service/repair or manufacturing environments or anywhere you encounter small metric components.

- Metric
- Red case
- 31.35mm shaft hole depth

Includes: 4mm through 8mm, 10mm, 11mm, 13mm

Part No.	Description	1	5
218042CP	Nut driver kit	$59.95	$55.95

For more tools see pages 148-153.

USB Pocket/Thumb Drives

New Lower Prices

What better way to keep your data safe than to keep it close to you? Thumb drives are compact and easily fit in your pocket or hang around your neck. Portable and lightweight, no external power needed. No drivers necessary for Mac OS or Windows® ME and above.

- 10 year data retention
- Size: 2.9"L x 0.7"W x 0.4"H

Includes: Windows® 98/98SE driver diskette and quick start guide

Part No.	Description	1	10
217752CP	16MB thumb drive......................	$29.95	$27.95
217761CP	32MB thumb drive......................	36.95	34.95
217779CP	64MB thumb drive......................	54.95	51.95
217787CP	128MB thumb drive....................	89.95	85.95
217795CP	512MB thumb drive....................	299.95	292.95

Personal Security Essentials

Never Be Without Light With Our Solar Lantern

The perfect light source for emergency situations. You will never run out of light with this lantern. This rechargeable lantern features a three-way power system: solar power – charge the built-in battery during the day for night time use; 3-D size alkaline batteries; or AC/DC adapter that can also charge the built-in battery.

Designed for indoor or outdoor activities with three unique features: solar fluorescent light, solar blinking light and solar searchlight.

- 8-10 hours in full sun for a fully-charged battery
- Up to 3 hours of operation when using flashlight and fluorescent light simultaneously; 10 hours of blinking light; 8 hours of torch light; 4 hours of fluorescent light
- Size: 5.6"W x 2.1"D x 11.5"H
- Weight: 1.8 lbs.

Includes: Strap and spare bulbs

Part No.	Description	1	10
219598CP	Solar rechargeable lantern..........	$69.95	$64.95

Security products on pages 182-184.

Popular and Out-of-Production Electronic Products
24/7 Service, Expert Support, and Low-Price Guarantee

Integrated Circuits

We continue to grow our line of integrated circuits to meet your needs; including a full line of EPROM, SRAM, Flash, DRAM, CPUs, embedded processors, programmable devices, linear and more.

Complete selection on pages 64-73.

Open Frame Power Supplies

40-Watt Open Frame

NFS-40 Series: Single Outputs

- 100% full-load burn-in
- Universal AC input
- No minimum load required
- 50 watts with 20 CFM of air
- Two-year warranty
- 1U Package: 5 x 3 x 1.2

More Power Supplies on page 8.

Part No.	Product No.	Power (W)	Output	1	10	50
218510CP	NFS40-7605	30.6	+5.1V @ 0-6.0A	$52.95	$45.25	$42.55
218528CP	NFS40-7612	39.6	+12V @ 0-3.3A	52.95	45.25	42.55
218536CP	NFS40-7624	38.4	+24V @ 0-1.6A	52.95	45.25	42.55

Connectors

Jameco offers a broad selection of connectors including solder tail and wire wrap DIP, SIMM, SIPP, ZIF, PLCC, D-sub, single & dual-row headers and more.

Connectors on pages 122-127.

Even More Test Equipment

Save with our full line of value-priced test equipment. You'll find equipment from DMMs and scopes to test leads and infrared thermometers. Plus, you'll find brands you trust, like Fluke, Metex, BK Precision and more.

See pages 136-147 for complete listing.

Name-Brand Power Supplies

26 New Pages

Jameco should be your primary source for power products. We now offer you 26 pages of switching power supplies plus another 11 pages of DC-to-DC converters. You'll find Artesyn, a high-quality US brand, as well as value-priced, high-quality offerings from Mean Well and others.

See pages 5-55 for power products.

Find More Products @ www.Jameco.com

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